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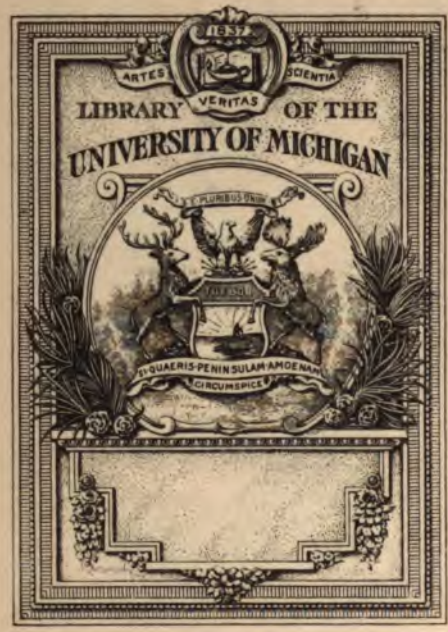

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OBSTETRICAL TRANSACTIONS.

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VOL. VIII.

TRANSACTIONS

OF THE

OBSTETRICAL SOCIETY

OF

LONDON.

VOL. VIII.

FOR THE YEAR 1866.

WITH A LIST OF OFFICERS, FELLOWS, ETC.

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1862 CHURCHILL, FLEETWOOD, M.D., Professor of Midwifery, King's and Queen's College of Physicians, Ireland; 15, Stephen's green north, Dublin.

1862 MCCLINTOCK, ALFRED H., M.D., late Master of the Lying-in Hospital; 21, Merrion square north, Dublin.

1862 DUNCAN, JAMES MATTHEWS, M.D., A.M., Lecturer on Midwifery and Diseases of Women and Children, Surgeon's Hall; 30, Charlotte square, Edinburgh.

1862 HALL, ARCHIBALD, M.D., Professor of Midwifery, University of McGill College, Montreal, Canada.

1863 PAGAN, JOHN, M.D., Professor of Midwifery at the University, Glasgow; 83, West Regent street, Glasgow.

1862 SIMPSON, SIR JAMES Y., Bart., M.D., D.C.L., Professor of Midwifery, University of Edinburgh, Physician-Accoucheur to the Queen in Scotland; 52, Queen street, Edinburgh.

FOREIGN SUBJECTS.

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1863 DEPAUL, JEAN ANNE HENRI, M.D., Paris.

1862 DUBOIS, BARON PAUL, late Professor of Clinical Midwifery in the Faculty of Medicine, Paris.

1863 FAYE, F. C., Professor of Midwifery in the University of Christiania.

1864 HECKER, C., Professor at Munich.

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1866 LAZAREWITCH, J., Professor, Charkov, Russia.

1866 LAZZATI, PIETRO, Professor at Milan.

1863 MARTIN, EDUARD, M.D., Director of the Institute for Clinical Midwifery at the University, Berlin.

1862 MEIGS, CHARLES D., M.D., late Professor of Obstetrics, &c., in the Jefferson Medical College, Philadelphia, U.S.

1864 PAJOT, CH., M.D., Professor at the Faculty of Medicine, Paris.

1866 RIZZOLI, FRANCESCO, Professor at Bologna.

1862 SCANZONI, F. W. VON, M.D., Professor of Midwifery, Würzburg.

1864 SIMS, J. MARION, M.D., late Surgeon to the Women's Hospital, New York.

1866 THOMAS, ABRAHAM EVERARD SIMON, Professor at Leyden.

1862 VIRCHOW, RUDOLF, M.D., Professor of Pathological Anatomy in the University of Berlin.

ORDINARY FELLOWS.

Those marked thus (*) have paid the Composition Fee in lieu of further annual subscriptions.

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1861 ALDRIDGE, JOHN PETTY, M.D., Shirley House, Dorchester.

1859 ALLEN, GEORGE, M.D., 35, Soho square, and 14A, Dean street, Soho, W.

1859 AMSDEN, GEORGE JOHN, M.D., 85, St. Paul's road, Highbury, N.

1866 ANDREWS, HENRY CHARLES, M.D., 1, Oakley square, N.W.

1859 ANDREWS, JAMES, M.D., 149, Camden road, N.W.

1859 ARCHER, JOHN, F.R.C.S., Surgeon to the Birmingham Lying-in Hospital; 9, Carpenter road, Edgbaston, Birmingham.

1861 ARMSTRONG, JOHN, M.D., Gravesend, Kent.

1859 ASPINALL, THOMAS, Green street, Over Darwen, Lancashire.

1859 AVELING, JAMES H., M.D., Senior Medical Officer to the Sheffield Hospital for Women; 5, Howard street, Sheffield. *Council*, 1865-66. *Hon. Loc. Sec.*

1866 AVENT, NICHOLAS, 18, Stamford villas, Fulham road, S.W.

1859 AYLING, WILLIAM HENRY, L.R.C.P. Ed., 103, Great Portland street, W.

1864 BAKER, BENSON, 94, Lisson grove, N.W.

1859 BAKER, JOHN WRIGHT, 102, Friar gate, Derby.

1859 BALLARD, THOMAS, M.D., 10, Southwick place, Hyde Park, W.

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Elected

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1863 BARKER, EDWARD, F.R.C.S., Senior Surgeon to the Melbourne Hospital, Victoria.

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1859 BARNES, ROBERT, M.D., F.R.C.P., Lecturer on Midwifery at St. Thomas's Hospital; Physician to the Royal Maternity Charity; 46, Finsbury square, E.C. *Vice-Pres.* 1859-60. *Council,* 1861-62, 1867. *Treas.* 1863-64. *Pres.* 1865-66.

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1863 BARRATT, JOSEPH G., M.D., 8, Cleveland gardens, Bayswater, W.

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Elected

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1863 COWARD, JOHN W., Christchurch, Canterbury, New Zealand.

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1859 CURGENVEN, J. BRENDON, 11, Craven hill gardens, Bayswater, W.

1866 DANE, THOMAS, 24, New Finchley road, N.W.

1859 DAVIES, JOHN, M.D., Coleshill, Warwickshire.

1859 DAVIS, JOHN HALL, M.D., F.R.C.P., Physician-Accoucheur to the Middlesex Hospital; Physician to the Royal Maternity Charity; Consulting-Physician to the St. Pancras Infirmary; 24, Harley street, Cavendish square, W. *Council*, 1859, 1864-5. *Vice.-Pres.*, 1861-63. *Pres.* 1867.

1863 DAVIS, ROBERT ALEX., M.D., L.R.C.P. Ed. (exam.), County Asylum, Burntwood, near Lichfield, Stafford.

1859 DAY, WILLIAM HENRY, M.D., 10, Manchester square.

1866 DEANS, JOHN, Shepherd's House, Cranbrook, Kent.

1861 DE LA MOTTE, HENRY D. C., Swanage, Dorset.

1859 DENNY, JOHN, L.R.C.P. Ed., 1, Sumner terrace, Onslow square, Brompton, S.W.

1864 DES FORGES, EDWARD, South Cave, near Brough, Yorkshire.

1866 DEWSNAP, WILLIAM, 1, Theresa terrace, Hammersmith, W.

1860 DICKENSON, JOHN, F.R.C.S., Surgeon to the Wrexham Infirmary; Wrexham, Denbighshire.

1859 DICKSON, JOSEPH, M.D., 56, Bath street, Jersey.

1859 DIXON, JOHN, M.D., 20, Prospect row, Bermondsey, S.E.

1859 DRAGE, CHARLES, M.D., Hatfield, Herts. *Council*, 1861-64.

1859 DRUITT, ROBERT, M.R.C.P., Medical Officer of Health for St. George's, Hanover square; 37, Hertford street, Mayfair, W. *Council*, 1859-60. *Vice-Pres.* 1862-64.

1859 DRUITT, WILLIAM, F.R.C.S., Wimborne, Dorset.

1859 DUFTY, FRED., Stoney Stratford, Bucks.

1859 DUNCAN, JAMES, M.B., 8, Henrietta street, Covent garden, W.C.

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1859 DUNCAN, PETER CHARLES, M.D., 46, Great Marlborough street, W.

1862 DUNN, JOSEPH THOS. HOLT, L.R.C.P. Edin. (exam.), 109, Hereford road, Westbourne grove, W.

1859 DUNN, ROBERT, F.R.C.S., 31, Norfolk street, Strand, W.C. *Council*, 1860. *Vice-Pres.* 1861-62.

1861 EARLE, JAMES LUMLEY, M.D., Obstetric Surgeon to the Queen's Hospital; 92, New Hall street, Birmingham. *Council*, 1866-67.

1859* EASSON, JAMES, 23, Princes street, Cavendish square, W.

1861 EASTLAKE, HENRY E., F.K.Q.C.P. Ireland, Medical Officer to the British Lying-in Hospital, and Accoucheur to the St. Marylebone General Dispensary; 48, Welbeck street, W. *Council*, 1866-67.

1866 EASTON, JOHN, M.D., 20, Connaught square, W.

1861 EDWARDS, THOMAS EDWIN, L.R.C.P. Lond., 98, Gloucester crescent, Hyde park, W.

1859 ELKINGTON, FRANCIS, M.D., Consulting Accoucheur to the Birmingham and Midland Counties Lying-in Hospital, and Lecturer on Midwifery at Sydenham College; 92½, New Hall street, Birmingham. (Clarendon, Frontenac, Canada West.) *Council*, 1859. *Vice-Pres.* 1860-61.

1859 ELLIOTT, ROBERT, F.R.C.S. Edin., Senior Surgeon to the Chichester Infirmary; North street, Chichester.

1866 ELLIOTT, ROBERT ARTHUR, Assistant-Surgeon, 95th Regiment (India). Chichester.

1862 ELLIS, EDWARD, M.D., Physician to the Samaritan Free Hospital, and to the South London Hospital for Children; 118, Warwick street, Belgravia, S.W.

1861 ELLIS, ROBERT, Obstetric Surgeon to the Chelsea, Brompton, and Belgrave Dispensary; 63, Sloane street, S.W.

1862 ELLISON, JAMES, M.D., 14, High street, Windsor, Berks.

1859 EVANS, GRIFFITH FRANCIS DORSETT, M.D., Trewern, near Welshpool, Montgomeryshire.

1861 EWEN, HENRY, F.R.C.S., Long Sutton, Lincolnshire.

1865 FAIRBANK, THOMAS, M.D., Sheet street, Windsor.

1859 FAIRCLOTH, RICHARD, F.R.C.S., Newmarket, Cambridgeshire.

1861 FARR, GEO. F., L.R.C.P. Edin., 20, West square, Southwark, S.

Elected

1859 FERGUSSON, SIR WILLIAM, Bart., F.R.C.S., F.R.S., Surgeon Extraordinary to H.M. the Queen, Professor of Surgery in King's College and Surgeon to King's College Hospital, Consulting Surgeon to the Samaritan Free Hospital; 16, George street, Hanover square, W. *Vice-Pres.* 1862-63.

1865 FERRIS, J. SPENCER, L.R.C.P., 62, Great Russell Street, W.C.

1861 FETHERSTON, GERALD H., B.A., M.D. Melb., L.R.C.P. Edin.; Melbourne Lying-in Hospital, and Prahran, near Melbourne, Victoria. *Hon. Loc. Sec.*

1865 FITZPATRICK, THOMAS, M.D., 5, Burwood place, Hyde park, W.

1865 FOWLER, JAMES, 13, South Parade, Wakefield. *Hon. Loc. Sec.*

1866 FOX, CORNELIUS BENJAMIN, M.D., Princess Royal Villa, South Cliff, Scarborough.

1862 FRAIN, JOSEPH, M.D., Senior Surgeon to the South Shields Dispensary, Frederick street, South Shields.

1861 FRANKLAND, THOMAS THRUSH, Surgeon to the Ripon Dispensary, Ripon, Yorkshire.

1864 FUSSELL, EDWARD FRANCIS, M.B., 34, Queen's road, Brighton.

1863 GALTON, JOHN HENRY, M.B. Lond., Foo-choo, China.

1863 GARMAN, HENRY VINCENT, Kent House, Bow road, E.

1859 GARTY, FRANCIS BOYLE, 3, Wellington square, Hastings.

1859 GASKOIN, GEORGE, 3, Westbourne park, W.

1864 GAUNT, JOHN SMITH, The Shrubbery, Alvechurch, Worcestershire.

1862 GAYTON, WILLIAM, 85, Brick lane, Spitalfields, N.E., and Adelaide Lodge, Lansdowne road, Hackney, N.E.

1859 GERVIS, HENRY, M.D., Assistant Obstetric Physician to St. Thomas's Hospital; Physician to the Surrey Dispensary; Consulting Physician to the Deaf and Dumb Asylum, and to the Asylum for Fatherless Children; 12, St. Thomas's street, Southwark, S.E. *Council,* 1864-66. *Hon. Sec.* 1867.

1866 GERVIS, FREDERICK HEUDEBOURCK, 33, Adelaide road, Haverstock hill, N.W.

1866 GIDDINGS, WILLIAM KITTO, Calverley, near Leeds, Yorkshire.

Elected

1864 GILBEE, WILLIAM, 113, Collins street East, Melbourne, Victoria.

1865 GILES, GEORGE FREDERICK, M.D., Clifton Villa, Victoria Park road, Hackney, N.E.

1860 GILL, SAMUEL L., L.R.C.P. Edin., 4, Campbell terrace, Bow road, E.

1861 GOSS, SAMUEL DAY, M.D. St. And., F.R.G.S., 111, Kennington park road, S.

1859 GOULSTONE, JOHN G., M.D., 30, Clarence street, Liverpool.

1864 GRANVILLE, JOSEPH MORTIMER, L.R.C.P., Obstetrical Surgeon to the Bristol Dispensary.

1861 GREAM, GEORGE THOMPSON, M.D., Physician-Accoucheur to H.R.H. the Princess of Wales; 2, Upper Brook street, Grosvenor square, W. *Council*, 1862-63. *Vice-Pres.* 1864-66.

1859 GREENHALGH, ROBERT, M.D., Physician-Accoucheur and Lecturer on Midwifery to St. Bartholomew's Hospital, and Consulting Physician to the Samaritan Free Hospital, and to the City of London Lying-in Hospital; 77, Grosvenor street, W. *Council*, 1863, 1867. *Vice-Pres.* 1864-66.

1863 GRIFFITH, G. DE GORREQUER, Physician to the Hospital for Women and Children, Pimlico; Physician-Accoucheur to St. Saviour's Maternity; late Resident Surgeon at the London Surgical Home; 9, Lupus street, St. George's square, S.W.

1859 GRIFFITH, THOMAS TAYLOR, F.R.C.S., Consulting Surgeon to the Wrexham Infirmary; Wrexham, Denbighshire.

1859 GRIMSDALE, THOS. F., Surgeon to the Lying-in Hospital, and Lecturer on Diseases of Children at the Royal Infirmary School of Medicine; 29, Rodney street, Liverpool. *Council*, 1861-62.

1866 GROSJEAN, JAMES KEITH, 11, Sheffield gardens, Kensington, W.

1859 GUNN, THEOPHILUS MILLER, F.R.C.S., 40, York place, Baker street, W.

1865 GWYN, G. F., Westcroft House, Hammersmith.

Elected

1859 HADEN, FRANCIS SEYMOUR, F.R.C.S., Hon. Surgeon to the Government School of Science and Art; 62, Sloane street, S.W. *Council*, 1861-63. *Vice-Pres.* 1865-67.

1863 HAILEY, HAMMETT, The Elms, Newport Pagnell, Bucks.

1859 HALL, ALFRED, M.D., Senior Physician to the Brighton Dispensary; 30, Old Steyne, Brighton. *Council*, 1864-65. *Vice-Pres.* 1866-7. *Hon. Loc. Sec.*

1859 HALL, FREDERICK, 1, Jermyn street, St. James's, S.W.

1862 HALL, WILLIAM, Lecturer on Physiology, Leeds School of Medicine; Hillary place, Leeds.

1860 HARDEY, KEY, Surgeon to the West City Dispensary; 4, Wardrobe place, Doctors' Commons, E.C.

1859 HARLEY, GEORGE, M.D., F.R.C.P., Professor of Medical Jurisprudence, University College, and Assistant-Physician to University College Hospital; 25, Harley street, Cavendish square, W. *Council*, 1861-63.

1859 HARPER, PHILIP H., F.R.C.S., Assistant-Surgeon to the London Home for Surgical Diseases of Women; 30, Cambridge street, Hyde park, W.

1865 HARRER, CARL, M.D., 16, City road, E.C.

1863 HARRIES, GWYNNE, M.D. Lond., Pembroke Dock, South Wales.

1859 HARRINSON, ISAAC, F.R.C.S., Castle street, Reading, Berks. *Council*, 1862-65. *Hon. Loc. Sec.*

1862 HARRIS, CHARLES, M.D., Northiam, Sussex.

1861 HARRIS, HERBERT ROBEY, 52, Bolton street, Bury, Lancashire.

1861 HARRIS, WILLIAM JOHN, 4, Bedford row, Worthing.

1864 HARRISON, SAMUEL NORTON, Kilham, Driffield, Yorkshire.

1864 HARTLEY, J. HENRY, M.R.C.S., 9, North road, Clapham park, S.

1865 HARVEY, ROBERT, M.D., Indian Army, Bengal Presidency.

1859 HARVEY, WILLIAM, 48, Lonsdale square, Islington, N.

1864 HASENFELD, EMMANUEL, M.D., Pesth, Hungary.

1861 HAVILAND, EDWARD SAVAGE, M.D., 13, Lyon terrace, Maida hill, W.

1865 HAYES, HAWKESLEY ROCHE, Basingstoke, Hants.

1862 HAYMAN, CHARLES CHRISTOPHER, M.D., Eastbourne, Sussex.

Elected

1864 HEAD, EDWARD, M.B., Obstetrical Physician to the London Hospital, 91, Harley street, W.

1865 HECKFORD, NATHANIEL, London Hospital, E.

1860 HESS, AUGUSTUS, M.D., Physician to the Jews' Hospital, Mile End; 14, Artillery place, City road, Finsbury square, E.C.

1859 HEWITT, GRAILY, M.D., F.R.C.P., Professor of Midwifery in University College, London, and Obstetric Physician to University College Hospital; 36, Berkeley square, W. *Hon. Sec.* 1859-64. *Treas.* 1865-66. *Vice-Pres.* 1867.

1862 HEWITT, TOM SMITH, M.D., Ivy Cottage, Winkfield, Windsor, Berks.

1863 HIBBERD, EDWARD, M.D.

1860 HICKS, JOHN BRAXTON, M.D., F.R.S., Assistant Physician-Accoucheur to, and one of the Lecturers on Midwifery and the Diseases of Women and Children at, Guy's Hospital; Physician to the Royal Maternity Charity, and to the Royal Infirmary for Diseases of Children and Women, Waterloo road; 9, St. Thomas's street, Southwark, S.E. *Council,* 1861-62. *Hon. Sec.* 1863-65. *Vice. Pres.* 1866-67.

1860 HIGGS, THOMAS FREDERIC, L.R.C.P. Edin.; Wolverhampton street, Dudley, Worcestershire.

1859 HIRD, FRANCIS, F.R.C.S., formerly Surgeon to the Royal Infirmary for Children, Surgeon to Charing Cross Hospital; 13, Old Burlington street, W. *Council,* 1861-62.

1865 HODDER, EDWARD M., M.D., Toronto, Canada West.

1859 HODGES, RICHARD, M.D., 1, Montagu street, Portman square, W.

1859 HODGSON, GEORGE FREDERICK, 52, Montpellier road, Brighton.

1864 HOFFMEISTER, WILLIAM CARTER, M.D., Surgeon to the Queen in the Isle of Wight; Cowes, Isle of Wight.

1859 HOLMAN, ANDREW, 10, John street, America square, E.C.

1859 HOLMAN, CONSTANTINE, M.D., Reigate, Surrey. *Council,* 1867.

1860 HOLMAN, HENRY MARTIN, M.D., Hurstpierpoint, Sussex.

Elected

1864 HOOD, WHARTON PETER, M.D., 65, Upper Berkeley street, W.

1866 HORNIBLOW, RICHARD E. BRAIN, M.D., 36, Upper parade, Leamington.

1861 HORTON, GEORGE EDWARD, Dudley, Worcestershire.

1864 HOUGHTON, HENRY GEORGE, M.D., 6, Mount street, Grosvenor square.

1859 HUSSEY, EDWARD LAW, F.R.C.S., Senior Surgeon to the Radcliffe Infirmary, and Consulting Surgeon to the County Lunatic Asylum and the Warneford Asylum; 104, St. Aldate's, Oxford.

1859 HUTCHINSON, JONATHAN, Assistant-Surgeon to the London Hospital; 4, Finsbury circus, E.C.

1865 HUTCHINSON, THOMAS STEERS, L.R.C.P. Edin., Newington, Sittingbourne, Kent.

1861 HUTTON, CHARLES, M.D., Physician to the General Lying-in-Hospital; 26, Lowndes street, Belgrave square, S.W.

1859 ILOTT, JAMES WILLIAM, Bromley, Kent.

1859 IMAGE, WILLIAM EDMUND, F.R.C.S., Senior Surgeon to the Suffolk General Hospital; Bury St. Edmund's, Suffolk.

1864 JACKSON, EDWARD, M.B., Fern bank, Glossop road, Sheffield.

1864 JACKSON, ROBERT, M.D., 53, Notting Hill square, W.

1861 JACKSON, THOMAS HAYES, M.D., 18, Market place, Darlington, Durham.

1859 JAMES, HENRY, F.R.C.S., Holmwood, Weybridge, Surrey. *Council*, 1862-63.

1862 JAY, FREDERICK FITZHERBERT, L.R.C.P., Watton, Thetford Norfolk.

1863 JENKINS, ROBERT W., 22, Philpot lane, E.C.

1859 JENNINGS, JOSEPH C.S., Abbey House, Malmesbury, Wilts.

1860 JEPSON, HENRY, F.R.C.S., Surgeon to the Kingston Dispensary; Hampton, Middlesex, S.W.

1862 JOHNSON, EDWARD, M.D., 19, Cavendish place, Cavendish square, W.

1863 JOHNSON, HENRY SCHOLFIELD, M.D., West street, Congleton, Cheshire.

1861 JONES, EDWARD, M.D., The Park, Sydenham, Kent.

1859 JONES, GEORGE, 12, New Hall street, Birmingham.

Elected

1859 JONES, JOHN WILLIAM, Port Dinorwic, near Bangor, Caernarvonshire.

1866 JONES, ROBERT, 19, Stretford road, Hulme, Manchester.

1859 KEALY, JOHN ROBERT, M.D., Ashley House, Gosport, Hants. *Hon. Loc. Sec.*

1859 KEELE, GEORGE THOMAS, 81, St. Paul's road, Highbury, N.

1859 KENDALL, THOMAS MARSTERS, F.R.C.S., Medical Attendant to their R. H. the Prince and Princess of Wales at Sandringham, Surgeon to the West Norfolk and Lynn Hospital; King's Lynn, Norfolk.

1861 KERBEY, WILLIAM HOLMAN, Weobley, Herefordshire.

1865* KERNOT, GEORGE CHARLES, M.D., 3, Chrisp street, Poplar, E.

1859 KIALLMARK, HENRY WALTER, 66, Princes square, Westbourne grove, W.

1860 KINGSFORD, EDWARD, F.R.C.S., Surgeon to the Sunbury Dispensary; Sunbury, Middlesex, S.W.

1862 KIRKPATRICK, JOHN RUTHERFORD, M.B., T.C.D., Lying-in-Hospital, 32, Rutland square, Dublin.

1860 KISCH, JOSEPH, 2, Circus place, Finsbury circus, E.C.

1862 LAMB, JOHN STEWART, M.D., 4, Windsor terrace, Maida vale, W.

1859 LANGMORE, J. CHARLES, M.B., F.R.C.S., 12, Sussex gardens, W. *Council*, 1861-64.

1866 LANGSTON, THOMAS, L.R.C.P. Ed., 29, Broadway, Westminster, S.W.

1862 LANPHIER, RICHARD, M.B. Dub., Alford, Lincolnshire.

1859 LEE, NEWTON B. C., 11, Talbot terrace, Talbot road, Bayswater, W.

1859 LEECH, EDWARD, Pallant, Chichester, Sussex.

1860 LEISHMAN, WILLIAM, M.D., Physician to the Glasgow Royal Infirmary, to the University Lying-in-Hospital, and to the Dispensary for the Diseases of Women and Children; 7, Blythswood square, Glasgow. *Council*, 1866-67.

1866 LOANE, JOHN, L.R.C.P. Ed., 1, Dock street, Whitechapel, E.

1859 LOCOCK, SIR CHAS., Bart., M.D., F.R.C.P., First Physician-Accoucheur to H. M. the Queen; 26, Hertford street, Mayfair, W. *Honorary President.*

1859 LOMBE, THOMAS ROBERT, M.D., Bemerton, Torquay.

Elected

1861 LOVE, GILBERT, Wimbledon, Surrey, S.W.

1866 LOVEGROVE, CHARLES, M.D., Sevenoaks, Kent.

1866 LOW, ALEX. JAMES, 33, Gloucester terrace, Hyde park, W.

1862 LOWE, GEORGE, F.R.C.S., Burton-on-Trent, Staffordshire.

1866 LUCEY, WILLIAM CUBITT, M.D., 1, Neptune villas, Upper Grange road, Bermondsey, S.E.

1862 MACKENZIE, GEORGE WISE, Thetford, Norfolk.

1859 MACKINDER, DRAPER, M.D., Consulting Surgeon to the Gainsborough Dispensary; Gainsborough, Lincolnshire.

1866 MACKINTOSH, HUGH, M.D., Brompton row, W.

1866 MADDEVER, JOHN COOMBE, M.D., 59, High street, Rothesay.

1859 MACRAE, JOHN, 4, High street, Lewes, Sussex.

1861 MCVEAGH, DENNIS, L.K. and Q.C.P. Ireland, 33, Bishop street, Coventry, Warwickshire.

1859 MADGE, HENRY, M.D., 32, Fitzroy square, W. *Council*, 1863-65.

1860 MARLEY, HENRY FREDERICK, Padstow, Cornwall.

1859 MARLEY, RICHARD, Bromyard, Herefordshire.

1862 MARRIOTT, ROBERT BUCHANAN, Swaffham, Norfolk.

1860 MARSHALL, JAS., M.D., 6, Rubislaw place, Aberdeen.

1862 MARSHALL, JOHN, L.R.C.P. Lond., 29, Castle street, Dover.

1859 MARSHALL, JOHN BRAKE, Nightingale road Downs, Clapton, N.E.

1859 MARSHALL, PETER, 43, Bedford square, W.C.

1860 MARTIN, HENRY VICTOR, F.R.C.S., Staines, Middlesex.

1864 MARTIN, LAURENCE J., M.D., 126, Collins street east, Melbourne, Victoria.

1859 MARTIN, WILLIAM, M.D., F.R.C.S., 6, Trevor terrace, Rutland gate, Brompton, S.W.

1866 MATTEI, ANTOINE, M.D., Professor of Midwifery, Rue Rivoli 150, Paris.

1861 MATTHEWS, JOHN, M.D., 4, Mylne street, Myddelton square, E.C.

1859 MEADOWS, ALFRED, M.D., Physician-Accoucheur for the Out-Patients to the General Lying-in Hospital, York road; Physician to the Hospital for Women, Soho square; 27, George street, Hanover square, W. *Council*, 1862-64. *Hon. Sec.* 1865-66. *Hon. Lib.* 1865. *Treas.* 1867.

Elected

1859 MERRIMAN, SAMUEL WILLIAM JOHN, M.D., Consulting Physician-Accoucheur to the Westminster General Dispensary, and Physician-Accoucheur to the Western General Dispeusary; 13, Godolphin road, New road, Hammersmith. *Council*, 1859-60.

1865 MIDDLETON, JOHN W., M.D., 8, Rue Marie de Bourgogne, Brussels.

1859 MILES, CHARLES, 13, Conduit street west, Westbourne terrace, W.

1859 MITCHELL, JOSEPH THOMAS, F.R.C.S., 8, Percy place, Clapham road, S. *Council*, 1863-67.

1866 MOLLOY, WM. THOMAS, Balmoral, Victoria.

1859 MOORHEAD, JOHN, M.D., Surgeon to the Weymouth Infirmary and Dispensary; Weymouth, Dorset.

1863 MORGAN, EDWARD, Llanelly, Caermarthenshire.

1865 MOSELEY, GEORGE, F.R.C.S., 51, Priory road, Kilburn.

1865 MOXEY, DAVID ANDERSON, M.D., Maryfield House, Turnham green, Middlesex.

1859 MOYLES, THOMAS, M.D., 109, Broad street, Birmingham.

1863 MURPHY, WILLIAM, M.D., Peitermaritzburg, South Africa.

1859 MURRAY, GUSTAVUS CHARLES P., M.D., Physician-Accoucheur to the Great Northern Hospital, Medical Officer to the British Lying-in Hospital, Physician for Diseases of Women and Children to the St. George's and St. James's Dispensary; 17, Green street, Grosvenor square, W. *Council*, 1864-65. *Hon. Sec.* 1866-67.

1859 MUSGRAVE, JOHNSON THOMAS, 29, Finchley road, N.W. *Council*, 1859-60.

1859 NAPPER, ALBERT, Broad Oak, Cranley, Guildford, Surrey. *Council*, 1866-67.

1863 NASON, JOHN JAMES, M.B. Lond., 11, Bridge street, Stratford-upon-Avon.

1859 NASON, RICHARD BIRD, Nuneaton, Warwickshire.

1859 NEAL, JAMES, M.D., 85, New Hall street, Birmingham.

1866 NEILD, JAMES EDWARD, M.D., Lecturer on Forensic Medicine, Melbourne University; 166, Collins street east, Melbourne.

1859 NEWMAN, WILLIAM, M.D., St. Martin's, Stamford-Baron, Northamptonshire.

Elected

1859 NEWTON, EDWARD, F.R.C.S., 4, Upper Wimpole street, W. *Council*, 1865-67.

1861 NICHOLS, GEORGE W., Almond Tree House, Rotherhithe, S.E.

1861 NICHOLSON, WILLIAM HUNTER, 58, Ossulston street, Somers Town, N.W.

1859 NUNN, THOMAS WILLIAM, F.R.C.S., Surgeon to the Middlesex Hospital; 8, Stratford place, Oxford street, W.

1860 OAKSHOTT, JOHN, Highgate, N.

1859 O'FLAHERTY, THOMAS AUSTIN, M.D., 2, Baker street, Portman square, W.

1859 OLDHAM, HENRY, M.D., F.R.C.P., Obstetric Physician and Lecturer on Midwifery and Diseases of Women and Children at Guy's Hospital; 26, Finsbury square, E.C. *Vice-Pres.* 1859. *Council*, 1860, 1865-66. *Treas.* 1861-62. *Pres.* 1863-64.

1859 OLDHAM, JAMES, F.R.C.S., Consulting Surgeon, Brighton Lying-in Institution; 53, Norfolk square, Brighton. *Council*, 1866-7.

1865 ORTIZ, MANUEL MARIA, M.D., Henry street, Port of Spain, Trinidad.

1863 OSWALD, JAMES WADDELL JEFFRIES, 28, Aldenham terrace, St. Pancras road, N.W.

1863 OWEN, ALBERT PHILIP, Churchfield place, Margate, Kent.

1861 OWEN, WILLIAM B., 61, Cleveland square, Hyde park, W.

1859 PALFREY, JAMES, M.D., Assistant Obstetrical Physician to the London Hospital, Senior Assistant Physician to the Metropolitan Free Hospital, and Obstetric Physician to the Farringdon General Dispensary; 25, Finsbury place, E.C.

1862 PARKER, THEOPHILUS RT. BUSH, M.D., The Vicarage, Abbotsbury, Dorset.

1863 PARSON, EDWARD, M.D. Lond., Physician-Accoucheur to, and Lecturer on Midwifery and Diseases of Women and Children at, the Charing Cross Hospital; Medical Officer for Out-Patients to Queen Charlotte's Lying-in Hospital; 8, Bolton street, Mayfair, W.

1865* PATERSON, JAMES, M.D., Rosewall, Partick, Glasgow.

Elected

1860 PAYNE, CHARLES HENRY, M.D., Wimbledon, Surrey, S.W.

1866 PEACOCK, ALBERT LOUIS, Ford Cottage, Churchinford, near Honiton, Devonshire.

1860 PEARSE, GEORGE, L.R.C.P. Edin., 10, Regent street, Westminster, S.W.

1864 PEARSON, DAVID RITCHIE, M.D., 23, Upper Phillimore place, Kensington, W.

1859 PEIRCE, R. KING, 16, Norland place, Notting hill, W.

1864 PHILLIPS, HOWELL CHARLES, M.D., 14, Colville square, Kensington park, W.

1866 PHILLIPS, JOHN JONES, M.B. Lond., Demonstrator of Anatomy at Guy's Hospital, 43, Trinity square, S.E.

1866 PILCHER, WILLIAM JOHN, Boston, Lincolnshire.

1859 PINCHARD, BENJAMIN, M.D., Cottenham, Cambridgeshire.

1864 PLAYFAIR, William, M.D., Assistant-Physician for the Diseases of Women and Children to King's College Hospital; 5, Curzon street, Mayfair, W. *Council*, 1867.

1860* PLOWMAN, WM. T., M.D., H. Hardstaffe's, Esq., Hache Court, near Taunton.

1859 POLLARD, WILLIAM, Jun., Surgeon to the Torbay Infirmary and Dispensary, Torquay, Devon.

1860 POLLOCK, TIMOTHY, M.D., 26, Hatton garden, E.C. *Council*, 1866-67.

1860 PORTER, CHARLES, 54, Digbeth, Birmingham.

1859 POTTER, JEPHSON, M.D., 109, Upper Parliament street, Liverpool.

1864 POTTER, JOHN BAPTISTE, M.D., 3, Craven hill, Hyde park, W.

1859 POUND, GEORGE, Odiham, Hants.

1863 POWELL, JOSIAH T., M.D., 325, City road, E.C.

1864 POWELL, LLEWELLYN, Christchurch, Canterbury, New Zealand.

1864 PRICE, WILLIAM NICHOLSON, Lecturer on Midwifery at the Leeds School of Medicine; 7, East parade, Leeds.

1863 PRICE, WILLIAM PRESTON, M.D., Surgeon to the Metropolitan Infirmary for Scrofulous Children, Margate; 1, Ethelbert crescent, Margate.

Elected

1859 PRIESTLEY, W. O., M.D., F.R.C.P., Professor of Midwifery in King's College, London, Physician-Accoucheur to King's College Hospital, and Consulting Physician-Accoucheur to the St. Marylebone Infirmary; 17, Hertford street, Mayfair, W. *Council*, 1859-61, 1865-66. *Vice-Pres.* 1867.

1862 PRINCE, FREDERIC, Sawston, Cambridgeshire.

1864 PUGH, WILLIAM RUSS, M.D., 131, Collins street east, Melbourne, Victoria.

1859 RADFORD, THOMAS, M.D., Consulting Physician to St. Mary's Hospital, Manchester; Moor field, Higher Broughton, Manchester. *Vice-Pres.* 1859.

1859 RAMSAY, JOHN ALLEN, L.R.C.P. Ed., Great Shelford, Cambridge.

1860 RAMSBOTHAM, JOHN HODGSON, M.D., 16, Park place, Leeds.

1859 RANDALL, JOHN, M.D. Lond., Lecturer on Medical Jurisprudence, St. Mary's Hospital Medical School; Medical Officer, St. Marylebone Infirmary; 14, Portman street, Portman square, W.

1860 RANSOM, ROBERT, M.D., F.R.C.S., 5, Jesus lane, Cambridge.

1861 RASCH, ADOLPHUS A. F., M.D., Hon. Phys. to the Eastern Dispensary of the German Hospital; 7, South street, Finsbury square, E.C.

1859 RAY, EDWARD, F.R.C.S., Dulwich, Surrey, S. *Council*, 1864-66.

1860* RAYNER, JOHN, M.D., Swaledale House, Quadrant road north, Highbury New park, N.

1859 RAYNES, HENRY, Gringley-on-the-hill, Bawtry, Yorkshire.

1859 REE, HENRY PAWLE, L.R.C.P. Ed., Walham green, Fulham, S.W.

1859 REMINGTON, THOMAS, M.D., Medical Officer to the Clapham General Dispensary; 1, Grove place, North Brixton, S.

1860 RENTON, JOHN, Shotley bridge, Gateshead, Durham.

1862 RICHARDS, DAVID, 8, St. George's place, Brighton, Sussex.

1860 RICHARDS, JOHN SMITH CROSLAND, 36, Bedford square, W.C.

1859 RICHARDS, SAMUEL, M.D., 36, Bedford square, W.C. *Council*, 1864-66.

Elected

1862 RICHARDS, SMITH, 36, Bedford square, W.C.

1859 RICHARDSON, RICHARD, L.R.C.P. Edinb., Rhayader, Radnorshire.

1859 RICHARDSON, WILLIAM THOMAS, Ivy House, Highgate, N.

1859* ROBERTS, DAVID LLOYD, M.D., Surgeon to St. Mary's Hospital, Manchester; 23, St. John's street, Deansgate, Manchester. *Hon. Loc. Sec.*

1866 ROBERTS, ROBERT, Port Madoc, Carnarvonshire.

1860 ROBERTS, ROBERT PRICE, Rhyl, Flintshire.

1860 ROBINS, GEORGE, L.R.C.P. Ed., 98, Charlotte street, Fitzroy square, W.

1859 ROBINSON, THOMAS, M.D., 64, Lamb's Conduit street, W.C.

1859 ROGERS, WILLIAM RICHARD, M.D., Physician to the Samaritan Free Hospital; 56, Berners street, Oxford street, W.

1859 ROOTS, WILLIAM SUDLOW, F.R.C.S., F.L.S., Surgeon to the Royal Establishment at Hampton Court, Kingston-on-Thames, S.W.

1860 ROPER, ALFRED GEORGE, 57, North End, Croydon, Surrey.

1865 ROPER, GEORGE, 180, Shoreditch, N.E.

1859 ROSE, HENRY COOPER, M.D., High street, Hampstead, N.W.

1859 ROSS, DANIEL, Surgeon to the Metropolitan Police; 10, Commercial place, Commercial road east, E.

1859 ROSS, GEORGE, M.D., Surgeon to the Western City Dispensary; 11, Hart street, Bloomsbury, W.C.

1859 ROUTH, CHARLES HENRY FELIX, M.D., Physician to the Samaritan Free Hospital for Women and Children; 52, Montagu square, W. *Council*, 1859-60-61.

1866 RUGG, GEORGE PHILIP, M.D., 1, Stockwell villas, Clapham road, Stockwell.

1861 RUSSELL, WILLIAM ALEXANDER, L.R.C.P. Edin.; St. Peter street, St. Alban's, Herts.

1866 SABOIA, V., M.D., Rio de Janeiro.

1864 SALTER, J. H., Darcy House, Tolleshunt Darcy, Kelvedon, Essex.

1860 SANDERS, GODFREY, F.R.C.S., 17, Brewer street, Maidstone, Kent.

Elected

1862 SANKEY, WILLIAM, Extra L.R.C.P., 6, Upper Portland place, Wandsworth, S.W.

1865 SANSOM, ARTHUR ERNEST, M.D., 29, Duncan terrace, Islington, N.

1863 SAVAGE, HENRY, M.D. Lond., Physician to the Samaritan Hospital for Women; 45, Baker street, and South Laurie park, Norwood, S.

1859 SCOTT, JOHN, F.R.C.S., Surgeon to the Hospital for Women, Soho square; 49, Harley street, Cavendish square, W.

1860 SEDGWICK, LEONARD WILLIAM, M.D., 8, Cleveland square, Hyde park, W.

1863 SEQUEIRA, HENRY LITTLE, 1, Jewry street, Aldgate, E.C.

1866 SEQUEIRA, JAMES SCOTT, 34, Leman street, Goodman's fields, E.

1860 SEWELL, CHARLES BRODIE, M.D., 76, Guildford street, Russell square, W.C.

1862 SHARMAN, MALIM, 18, New Hall street, Birmingham.

1859 SHARPIN, HENRY WILSON, F.R.C.S., Surgeon to the Bedford General Infirmary, Bedford.

1860 SHAW, GEORGE, Portland House, Battersea, S.W.

1859 SHEARMAN, EDWARD JAMES, M.D., Moorgate, Rotherham, Yorkshire.

1859 SHEEHY, WILLIAM HENRY, L.R.C.P. Edin., 4, Claremont square, Pentonville, N.

1866 SHERATON, GEORGE ROBERT, L.R.C.P. Edin., Sedgefield, Ferryhill, Durham.

1862 SHILLINGFORD, ISAAC SHORTLAND, 124, Hill street, Peckham, S.E.

1859 SHIPTON, WILLIAM PARKER, Surgeon to the Buxton Bath Charity; Buxton, Derbyshire.

1860 SHIRLEY, HENRY JAMES, 4, Grove terrace, Kentish Town, N.W.

1861 SHORTT, JOHN, M.D., Assistant-Surgeon H.M. I. Army, Chingleput, Madras District.

1860 SKINNER, THOMAS, M.D., 1, St. James's road, Liverpool. *Council*, 1865-66. *Hon. Loc. Sec.*

1859 SLEEMAN, PHILIP ROWLING, F.R.C.S., Montrose House, Queen's road, Clifton.

1861 SLOMAN, SAMUEL GEORGE, Farnham, Surrey.

Elected

1861 SLYMAN, WILLIAM DANIEL, 18, Warden road, Kentish Town, N.W.

1860 SMART, THOMAS TOVEY, L.R.C.P. Edinb., South Villa, Bedminster, Bristol.

1859 SMILES, WILLIAM, M.D., Physician to the Royal General Dispensary, St. Pancras; 44, Bedford square, W.C.

1865 SMITH, H. FLY, M.B., 10, Kensington Park terrace, W.

1862 SMITH, HENRY, M.D., 8, St. Mary's terrace, Paddington, W.

1860 SMITH, JOHN, Coseley, near Bilston, Staffordshire.

1860 SMITH, JOSEPH EVANS, Oxford road, Hay, Breconshire.

1859 SMITH, PROTHEROE, M.D., Physician to the Hospital for Women, Soho square; 42, Park street, Grosvenor square, W.

1859 SMITH, SAMUEL, F.R.C.S., Senior Surgeon to the Leeds General Infirmary; Park place, Leeds. *Council*, 1860-62. *Hon. Loc. Sec.*

1859 SMITH, WILLIAM JOHNSON, M.D., Consulting Physician to the Weymouth Infirmary and Dispensary; Greenhill, Weymouth, Dorset.

1859 SMITH, W. TYLER, M.D., F.R.C.P., Physician-Accoucheur and Lecturer on Midwifery and Diseases of Women and Children to St. Mary's Hospital; 21, Upper Grosvenor street, W. *Treasurer & Vice-Pres.* 1859-60. *Pres.* 1861-62. *Council*, 1863-67.

1860 SNELL, EDMUND, 20, Stepney green, E.

1860 SNOW, JOHN ELLIOT, Walton, near Ipswich.

1859 SOMERVILLE, CHARLES, M.D., Bloxwich, Walsall, Staffordshire.

1866 SOPER, WILLIAM, 4, Clapham rise, S.

1859 SPENCER, GEORGE, 1, Horbury terrace, Notting hill, W.

1860 SPENCER, LAWRENCE, M.D., 9, Winckley square, Preston, Lancashire.

1862 SPRY, GEORGE FREDERICK, M.D., Assistant-Surgeon 9th Queen's Royal Lancers, Curragh Camp, Kildare, Ireland.

1859 SQUIRE, WILLIAM, 6, Orchard street, Portman square, W. *Council*, 1866-67.

1859 STANTON, JOHN, M.D., 9, Montagu square, W.

1860 STEDMAN, ROBERT SAVIGNAC, Sharnbrook, Bedfordshire.

Elected

1866 STEELE, ARTHUR BROWNE, Lecturer on Midwifery, Royal Infirmary School of Medicine; 62, Mount pleasant, Liverpool.

1860 STEPHENS, JOSEPH, M.D., 5, Pavilion parade, Brighton.

1859 STONE, JOSEPH, M.D., 84, Bloomsbury, Oxford street, Manchester.

1860 STONE, THOMAS, F.R.C.S., Resident Surgeon to Christ's Hospital.

1859 STOWERS, NOWELL, 125, Kennington park road, Kennington, S.

1866 STRANGE, WILLIAM HEATH, M.D., 4, The Avenue, Belsize park, Hampstead, N.W.

1859 STUTTER, FREDERICK AUGUSTUS, M.D., Farnboro' House, Upper Sydenham, Kent.

1862 SUTHERLAND, WILLIAM, M.D., 22, George street, Croydon, Surrey.

1862 SUTTON, FIELD FLOWERS, M.D., Balham hill, Clapham, S.

1859 SUTTON, JOHN MAULE, M.D., Tenby or Narberth, South Wales.

1859 SWAYNE, JOSEPH GRIFFITHS, M.D., Physician-Accoucheur to the British General Hospital; 12, York place, Clifton, Bristol. *Council*, 1860-61. *Vice-Pres.* 1862-64. *Hon. Loc. Sec.*

1860 SWEETING, GEORGE BACON, M.R.C.P., King's Lynn, Norfolk.

1863 SWYER, SEPTIMUS, L.R.C.P. Edinb., 32, Brick lane, Whitechapel, E.

1859 SYMONDS, FREDERICK, F.R.C.S., Surgeon to the Radcliffe Infirmary; 35, Beaumont street, Oxford. *Council*, 1862-65. *Hon. Loc. Sec.*

1866 TANNAHILL, ROBERT DUNLOP, M.D., Consulting Physician to the Lying-in Hospital, Glasgow.

1861 TANNER, JOHN, M.D., 118, Newington causeway, S.E.

1859 TANNER, THOS. HAWKES, M.D., F.L.S., 9, Henrietta street, Cavendish square, W. *Hon. Sec.* 1859-62. *Vice-Pres.* 1863-65.

1866 TANNER, MARK BATT, M.D., 3, St. George's square, Pimlico.

1859 TAPSON, ALFRED JOSEPH, M.B. Lond., 35, Gloucester gardens, Westbourne terrace, W. *Council*, 1862-64.

1863 TAPSON, JOSEPH ALFRED, 83, High street, Clapham, S.

1862 TASKER, RICHARD THOMAS, Melbourne, near Derby.

Elected

1859 TAYLOR, EDWARD, South Lodge, Clapham common, S.

1859 TAYLOR, CHARLES, M.D., 79, Camberwell road, S.

1859 TAYLOR, DAVID, 180, Kennington park road, S.

1862 TAYLOR, THOMAS, F.R.C.S., 19, Bennett's hill, Birmingham.

1862 THANE, GEORGE DANCER, M.D., 15, Montague street, Russell square, W.C.

1866 THOMAS, JABEZ, L.R.C.P. Ed.; Northampton villa, Swansea, South Wales.

1866 THOMPSON, JOHN, M.D., Bideford, Devon.

1860 THORNE, GEORGE LEWORTHY, M.D., Swanage, Dorset.

1862 THORNTON, WILLIAM HENRY, M.D., Springfield terrace, Dewsbury, Yorkshire.

1866 THORP, DISNEY, General Dispensary, Birmingham; Maldon, Essex.

1860 TIFFEN, ROBERT, M.D., Wigton, Cumberland.

1866 TILLEY, SAMUEL, 27, Paradise row, Rotherhithe, S.E.

1859 TILT, EDWARD JOHN, M.D., Consulting Physician to the Farringdon General Dispensary; 60, Grosvenor street, W. *Council*, 1867.

1859 TIMES, HENRY G., 23, Manchester street, Manchester square, W.

1861 TOMLINSON, ROBERT SHERRATT, The Woodlands, Burton-on-Trent.

1860 TORBOCK, THOMAS REDDISH, M.D., 9, Skinnergate, Darlington.

1865 TOWNSEND, HENRY MEREDITH, Thurlow House, Clapham rise, S.

1862 TRACY, RICHARD T., M.D., Physician to the Lying-in Hospital, Melbourne, Victoria.

1859 TRAER, JAMES REEVES, F.R.C.S., 47, Hans place, Sloane street, S.W. *Council*, 1865. *Hon. Lib.* 1866-67.

1865 TREND, HENRY GRISTOCK, L.R.C.P. Edinb., 191, Southgate road, Islington, N.

1860 TUKE, JAMES KINGDON, Surgeon-Accoucheur to the Brighton Lying-in Dispensary; 1, Devonshire place, Brighton.

1859 TULLOCH, JAMES STEWART, M.D., Surgeon to the Westbourne Dispensary; 1, Pembridge place, Bayswater, W.

1864 TURNBULL. M. W., M.D., Physician to the Lying-in Hospital, Melbourne, Victoria.

1861 TURNER, RICHARD, High street, Lewes, Sussex.

Elected

1865 TURNER, JOHN SIDNEY, Woodside, Anerley road, Upper Norwood, Surrey.

1863 TUTIN, JOHN HASLEDINE, Surgeon to the Ripon Dispensary, Westgate, Ripon, Yorkshire.

1861 TWEED, JOHN JAMES, Jun., F.R.C.S., 14, Upper Brook street, W.

1860 VARENNE, EZEKIEL G., Kelvedon, Essex.

1860 VINCENT, PATRICK, Wells-next-Sea, Norfolk.

1862 VINE, GEORGE JOHN, M.D., 3, Henrietta street, Covent garden, W.C.

1866 VIPAN, WILLIAM HENRY, Uxbridge.

1864 WAHLTUCH, ADOLPHE, M.D., 21, Lime grove, Oxford street, Manchester.

1859 WAITS, JOSEPH, 6, Market place, Devonshire road, Bromley-by-Bow, E.

1860 WALES, THOMAS GARNEYS, Jun., Downham, Norfolk.

1863 WALKER, THOMAS HOUGHTON, M.D., Encombe House, 15, London street, Reading, Berks.

1866 WALKER, THOMAS JAMES, M.D., Surgeon to the General Infirmary, Peterborough.

1860 WALKER, WILLIAM HENRY, L.R.C.P. Ed., Aldborough, near Darlington, Yorkshire.

1860 WALLER, JOHN TURPIN, Flegg Burgh, Norfolk.

1864 WALTON, BRINSLEY MARCIUS, 28, Old Steine, Brighton.

1859 WANE, DANIEL, M.D., 20, Grafton street, Bond street, W.

1860 WARD, JOHN, Penistone, Sheffield, Yorkshire.

1860 WARD, JOSEPH, Hill House, Epsom, Surrey.

1859 WARDEN, CHARLES, M.D., 39, Temple street, Birmingham.

1862 WATKINS, CHARLES STEWART, 11, Chandos street, Strand, W.C.

1861 WATTS, GEORGE HENRY, Thatcham, near Newbury, Berks.

1850 WEBB, HENRY SPEAKMAN, Welwyn, Herts.

1859 WEBB, J. CRASKE, M.D., 14, Lower Belgrave street, S.W.

1860 WELCHMAN, CHARLES EDWARD ELLIOT, Bore street, Lichfield, Staffordshire.

1859 WELLS, T. SPENCER, F.R.C.S., Surgeon in Ordinary to H.M.'s Household; Surgeon to the Samaritan Free Hospital for Women and Children; 3, Upper Grosvenor street, W. *Council*, 1859.

Elected

1859 WEST, ROBERT UVEDALE, M.D., Alford, Lincolnshire. *Council*, 1859. *Vice-Pres.* 1860-62.

1859 WESTMACOTT, JOHN GUISE, M.D., Medical Officer to the Paddington Provident Dispensary; 19, St. Mary's terrace, Paddington, W.

1860 WHEELER, DANIEL, Chelmsford, Essex.

1862 WHEELHOUSE, CLAUDIUS GALEN, F.R.C.S., Surgeon to the Leeds Dispensary, and Lecturer on Surgery, Leeds School of Medicine; 16, East parade, Leeds.

1860 WHITE, FREDERICK GEORGE, L.R.C.P. Ed., Castle House, Chepstow, Monmouthshire.

1859 WHITEHEAD, JAMES, M.D., Physician to the Manchester Clinical Hospital; 87, Mosley street, Manchester. *Council*, 1859-61.

1865 WHITEHEAD, WALTER, Mansfield, Woodhouse, Notts.

1864 WHITMARSH, WILLIAM MICHAEL, M.D., Hounslow, Middlesex.

1866 WILKINS, JOHN, M.B. Lond., Williams' Town, Victoria.

1864 WILKS, ALFRED G., M.B. and M.S. Camb., Guy's Hospital (travelling).

1861 WILLIAMS, ARTHUR WYNN, M.D., Physician-Accoucheur to the Western Dispensary; 1, Montagu square, W.

1861 WILLIAMS, DAVID JOHN, M.D., Queenscliff, Geelong, Victoria, Australia. *Hon. Loc. Sec.*

1864 WILLIAMS, EDWARD, M.D., Holt-street House, Wrexham.

1860 WILLIAMS, ROBERT HANKINSON, L.R.C.P. Ed., Great Eccleston, near Garstang, Lancashire.

1860 WILLS, JOHN, M.D., St. Helier's, Jersey.

1859 WILSON, JAMES GEORGE, M.D., Professor of Midwifery, University of Glasgow; Physician-Accoucheur to the Glasgow Lying-in Hospital and Dispensary; Clarence place, Sauchiehall street, Glasgow. *Council*, 1863-64. *Vice-Pres.* 1865-67.

1860 WILSON, ROBERT JAMES, L.R.C.P. Ed., 24, Grand Parade, St. Leonard's-on-Sea, Sussex. *Hon. Loc. Sec.*

1865 WILSON, THOMAS, L.R.C.P. Ed. (exam.), Alton, Hants.

1866 WILTSHIRE, ALFRED, M.D., 100, Hampstead road, N.W.

Elected

1860 WINTERBOTHAM, JOHN, Castleton, near Sheffield, Derbyshire.

1866 WINTERBOTTOM, HENRY, Consulting Surgeon and Lecturer on Diseases of Women and Children at St. Mary's Hospital, Manchester; 114, Great Ducie street, Strangeways, Manchester.

1860 WISEMAN, WILLIAM WOOD, Springstone House, Ossett, near Wakefield, Yorkshire.

1859 WITTEN, EDWARD W. (travelling).

1860 WOOD, WILLIAM JAMES, Brightwaltham, Wantage, Berks.

1864 WOODMAN, WILLIAM BATHURST, M.D., Stouehouse, Gloucestershire.

1859 WORSHIP, J. LUCAS, Riverhead, Sevenoaks, Kent.

1860 WRIGHT, GEORGE, Middleham, W. Bedale, Yorkshire.

1866 YEAMAN, GEORGE, M.D., 91, Sauchiehall street, Glasgow.

1866 YELD, HENRY JOHN, M.D., 19, Bridge street, Sunderland.

1861 YOUNG, WILLIAM BUTLER, 5, Castle street, Reading, Berks.

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OBSTETRICAL SOCIETY

OF

LONDON.

SESSION 1866.

ANNUAL GENERAL MEETING, JANUARY 3rd, 1866.

Dr. ROBERT BARNES, President, in the Chair.

Present—54 Members and 9 visitors.

THE following gentlemen were elected Fellows:—Messrs. R. J. Cane, Birmingham; John Deans, Cranbrook; F. H. Gervis, Adelaide Road; W. K. Giddings, Calverley, Yorkshire; T. Langston, Broadway, Westminster; W. T. Mollay, Balmoral, Victoria. Jabez Thomas, Swansea; Drs. W. C. Lucey, Bermondsey; J. C. Neild, Melbourne, Victoria; Mark Tanner, St. George's Square, Pimlico; H. J. Yeld, Sunderland.

CASE OF DOUBLE MONSTROSITY.

By J. G. SWAYNE, M.D.,

PHYSICIAN-ACCOUCHEUR TO THE BRISTOL GENERAL HOSPITAL, AND LECTURER ON MIDWIFERY AT THE BRISTOL MEDICAL SCHOOL.

THIS specimen of monstrosity was presented to the Museum of the Bristol Medical School by Mr. Talbot, of Park Street, Bristol, who kindly gave me the following history of the case:

The mother had had three children previously, her labours having been rapid and easy. She was confined on May 29th, 1864, after a rather tedious labour of twenty-four hours, and gave birth to this curious double monster (Fig. 1). It was seen to breathe distinctly with both mouths as soon as it was born, and to roll about all its eyes in a horrible manner. It was born at 7.20 p.m. Mr. Talbot saw it at 9 p.m. on the same evening, and it was then alive. The woman, however, who acted as nurse put it aside, and refused to wash or dress it. When he called the next morning, he found that it had died in the night. The parents readily gave him the body, and he kindly sent it to me for examination. With the exception of the head, the rest of the monstrosity presented the appearance of a well-formed but small female infant. It weighed four and a half pounds, and measured seventeen and three quarter inches in length. The head was very large, its circumference measuring thirteen and a half inches. Its antero-posterior diameter measured four, its transverse four and three quarters, whilst the occipito-mental diameter was as much as six inches. The head appeared, on examination, to consist of two heads united on the middle line. There were four eyes, two of these being contained in one common orbit. The noses and mouths were quite distinct, the point of union of the cheeks on the middle line being

Fig. 1.

Fig. 2.

denoted by a slight depression or dimple. The nasal cavities were distinct, and these, together with the two mouths, opened into one common cavity of the fauces. The tongue (Fig. 2) was bifid at the extremity, but single posteriorly. The hyoid bone, larynx, œsophagus, and trachea were single, as also were all the muscles of the neck before and behind. On reflecting the integuments of the head, I found three frontal bones—two distinct (Fig. 3, *d*, *d*), belonging one to each head, and one common (*b*), made up of two frontal bones united at their edges. There were also two distinct parietal bones (*c*, *c*, Figs. 3 and 4), and one large common bone (*a*, Figs. 3 and 4), formed by the close union of the two adjacent parietal bones. There was but one occipital bone (*b*, Fig. 4), but it was bifid at the top. I then examined the contents of the cranium; but as the weather at the time I received the body was very warm, the brain was so soft and diffluent that I was unable to make a proper dissection of it, or even to take a drawing. I was, however, able to make out a double cerebrum, and single cerebellum and medulla.

Fig. 3.

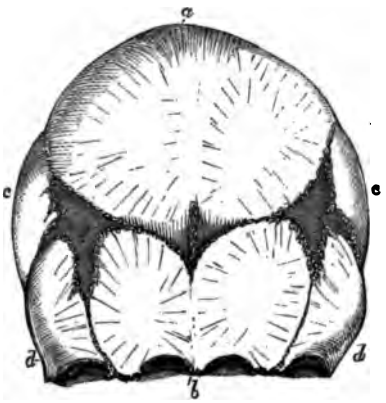
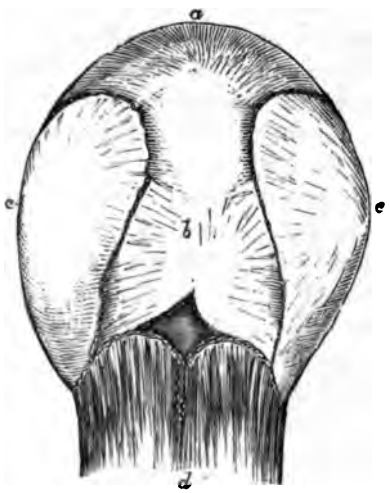


Fig. 4.



CASE OF MECHANICAL OBSTRUCTION IN GROWTH OF A FŒTUS.

By W. B. Owen, Esq.

In July last I was called to see Mrs. R—, the wife of a publican, who was then in her fifth month of pregnancy.

After a sudden effort, she was attacked with a somewhat free hæmorrhage, which continued in a mitigated degree for several days. From that time she ceased to feel the fœtal movements: that circumstance, connected with extreme coldness of the abdomen, led me to suspect the death of the fœtus, until the end of August, when they gradually, but never very vigorously, returned.

Sept. 20th.—I was summoned in consequence of the sudden rupture of the membranes, followed by a profuse discharge of water. On examination, I found the arm and hand in the vagina.

Having explained to my patient the necessity for turning, I introduced my hand into the uterus, and passed it up along the back of a well-formed child. Upon reaching the extreme end of the spine, I failed (in spite of a patient search) in discovering the legs or feet. Being at a loss to account for this anomaly, I proposed a second opinion, and sent for Dr. Tanner. Before his arrival, the pains, which became very strong, gradually expelled the breech, whilst the arm was drawn up into the uterus. On the expulsion of the child (which had but recently died), the cause of my dilemma was at once explained. The body, which was in every respect well formed, terminated abruptly at the lower part of the trunk.

The legs, which were those of a fœtus about the fourth month, were bound down in the front of the pelvis by the umbilical chord so closely, that they had become imbedded in the soft part of the walls of the abdomen. This had been effected by several convolutions of the chord, which had crossed three or four times alternately before and behind

the two limbs, so as to form the figure 8, and thus had entirely obstructed their growth. At one point, near the groin, the pressure had been so great and long-continued, that the cord had acted as a ligature, and was gradually effecting the amputation of the extremity. The legs were perfect in their formation, and but for the mechanical interference in their growth would have presented no irregularity.

The mother declined to allow me an examination.

Dr. Cory exhibited an ovum forceps, of which the accompanying drawing gives a representation, which is about one-third the size of the instrument. The blades are fenestrated, curved, and shaped, as is seen, somewhat after the pattern of the ordinary midwifery forceps, the handles being fixed together. The instrument is intended to be passed up into the uterus entire, to seize the ovum or any retained portion, and so effect its extraction.

Fig. 5.

Dr. Murray showed two large kidneys, weighing, the one, seven ounces and four drachms; and the other, six ounces three drachms and a half. They had been removed from a still-born fœtus otherwise normally formed.

BRIEF NOTES ON SOME UTERINE THERAPEUTICS.

By H. E. Eastlake, L.K.Q.C.P. Irel.,

PHYSICIAN TO THE BRITISH LYING-IN HOSPITAL; HONORARY FELLOW OF THE BERLIN OBSTETRICAL SOCIETY, ETC., ETC.

The object of the following notes is simply to direct the attention of the Fellows of the Society to the use of some medicinal agents which in my hands have proved of value in the treatment of certain uterine disorders. I should, perhaps, mention that although two out of the three medicines which I purpose noticing are officinal, appearing in the new British Pharmacopœia, their special action as *uterine* therapeutics has not, so far as I am aware, been alluded to by any writer on materia medica or uterine pathology.

The first of these drugs I will refer to is the least important; it is, nevertheless, worthy of observation. I have remarked that when I have employed the resin of podophyllum to relieve the constipated condition of the bowels which so often accompanies some forms of amenorrhœa, it has very frequently acted as an emmenagogue; but whether it really possesses any specific action upon the uterus, or simply operates sympathetically by stimulating the lower intestine in the same way that aloes and other cathartics do, I am not prepared to say. I may add that, as a *cathartic*, I have found the May apple a very uncertain remedy; the sixth of a grain having in one case acted energetically, while *three* grains in another has seemed to have no other effect than that of a uterine stimulant.

The next point that I wish particularly to bring before your notice is the beneficial use of the "Spiritus Pyroxylicus rectificatus" of the present Pharmacopœia in cases of obstinate vomiting in pregnancy.

This preparation, chemically speaking, is the hydrated oxide of methyle, and was, as most of you are probably aware, first introduced into the practice of medicine by Dr. Hastings, who regarded it as an almost absolute cure for pulmonary consumption. I have long considered it a very useful agent in arresting the sympathetic vomiting in phthisis, and last year employed it also in a most distressing and intractable case of sickness during utero-gestation with the very best result. The patient was, as nearly as I could reckon, in the sixth month of pregnancy; the fœtal heart was feebly audible. She had had three or four children, and told me that while she carried them, she had always suffered more or less from nausea and vomiting. I was asked to see her by a medical friend, in order to consider the advisability of inducing premature labour. This gentleman, under whose care she had been for some time, stated that he had on different occasions given her hydrocyanic acid with effervescing ammonia, bismuth, oxalate of cerium, creasote, opium, &c., with no beneficial result. Her condition when I first saw her was truly pitiful. The retching and vomiting were by no means confined to the morning, but continued more or less throughout the twenty-four hours. Misery and anguish were depicted in her features. Her condition, she said, had become much worse within the last ten days. Scarcely anything had been retained on the stomach; what she threw up was a bluish green fluid, and almost black at times. She was rapidly losing flesh, was greatly exhausted, and suffered from a most intense depression of spirits. She said she prayed for death if she could get no relief. As the fœtus was not of a viable age, I was most reluctant to induce labour; yet I felt convinced that she could not last long in the state I found her. Almost all the usual remedies had been employed, and had failed to do her good. As she complained of great restlessness from loss of sleep, I ordered a suppository containing half a grain of morphia to be introduced into the rectum, and left her. I saw her again in ten hours, but I found that she had had little or no sleep. I inserted a second suppository into the

bowel, and prescribed the medicinal naphtha in five-minim doses, with a drachm of the compound tincture of cardamoms, in water, every four hours. The effect was almost magical. By the time she had taken three doses, the symptoms had greatly abated, and in two days the sickness had entirely ceased. Her countenance soon became cheerful, her appetite returned, her strength rapidly improved; and I have the satisfaction of saying that she went to her full time, and gave birth to a very fine boy. I am by no means anxious to exaggerate the efficacy of this or any other medicine; I simply give my experience; and I must admit that I have not since seen such a distressing and urgent case of the kind; but in less serious ones it has never failed me. Last month a case of this description, belonging to the British Lying-in Hospital, came under my care, and it seemed, from the history the patient herself gave, to have hitherto been one of a very obstinate character. I had begun to give her this medicine with good effect, when I had to leave London for some time. It appears the patient has omitted to give her address to the matron of the hospital, which she promised to do, so that I have unfortunately lost sight of her. If such happy results are produced under similar circumstances in the hands of other practitioners, it must, I think, be regarded as a great boon by the profession. At any rate, the importance of the malady must be apparent to all those engaged in obstetric practice, the excessive exhaustion produced often ending fatally. Dr. Churchill and Professor Stolz have both stated their conviction that death from this cause is much more common than has been supposed; and Professor Dubois says, that in the course of thirteen years he has met with twenty cases which have proved fatal.

The next remedial agent I am anxious to draw your attention to is "*Iodoform*" as a sedative in cancer, especially where that disease attacks the uterus. This compound (CHI^3) is the teriodide of formyle, or perhaps more strictly, the di-iodated iodide of methyle. As practical physicians, we have little to do with the chemical history of the sub-

stance: it will, however, be as well to mention that it was discovered by Serullas in 1824, and is produced by the action of iodine and alkalis or alkaline carbonates on wood-spirit, alcohol, or ether; in small quantity also by the action of the same substances on cane-sugar, glucose, gum, dextrin, and several albuminous substances. It crystallizes in scales, is friable and soft to the touch, having a sulphur-yellow colour and the odour of saffron.

Any members of the profession who may be desirous of gaining much general information concerning this substance should refer to a very comprehensive monograph, written by Dr. Giovanni Righini, and translanted into French by Dr. Janssens. It is only reasonable to imagine, *a priori*, from its analogy to chloroform, that it would possess *anæsthetic* properties; and it is not, perhaps, too much to expect that it might have even some specific action in the morbid condition of cancer.

Some months ago, I made this suggestion to my friends Dr. Greenhalgh and Mr. Nunn, who, if present, will, I feel sure, tell us what has been the result of their experience in this matter in the large fields for clinical observation which they have at their command. My own personal observations have been very limited; at the same time I may fairly state, that in the few instances in which I have been enabled to administer iodoform in cancerous diseases, I have done so with such a favorable result as to make me determined to give it a fair trial in any future opportunities which may occur. I have given two and three grains at a time, in the form of a pill with the crumb of bread, and in one case of far-advanced disease also applied it locally to the cervix uteri by means of medicated pessaries, the effect produced being a marked diminution of pain and discomfort, without any evil results on the general health, such as constipation, nausea, loss of appetite, &c., which so often follows the administration of opium and other sedatives under similar circumstances. It would be useless, even if time permitted me, to extend these slender notes any further for the present.

Very probably some of the Fellows of the Society can now give some practical information on the subjects I have touched upon; in which case I feel that this paper will not have been written in vain.

Dr. GREENHALGH stated that eighteen months ago Dr. Eastlake called his attention to iodoform, suggesting its use as an anæsthetic and alterative, especially in cases of cancer.

Dr. Greenhalgh being unable for some time to procure any information concerning its medicinal effects and dose, commenced giving it in doses of a quarter of a grain; but he had, however, ascertained by experience that a much larger dose may be safely administered, and he was now in the habit of frequently giving three to five grains in pills three times a day. He had also used it as a vaginal suppository in the proportion of one grain to a scruple of cocoa-nut butter. He had prescribed this drug in carcinoma, external and internal; in epithelioma of the uterus; in rheumatic gout, neuralgia, in short, in numerous cases of chronic enlargements, and marked sensibility due to a variety of causes, in most of which it had been followed by good results. He specified one case in particular, which had been seen by several eminent surgeons, in which the left breast and surrounding parts were largely involved by rapidly advancing cancer. For a time the disease was arrested and the deposit considerably lessened, but ultimately the affection spread and the patient succumbed to repeated losses of blood from ulceration of the parts. It is worthy of remark that although it was the most severe case of cancer he had ever seen, yet, notwithstanding only half to two grain doses of iodoform were administered, the patient suffered little or no pain.

In some cases but slight effect appeared to result from its use; whereas in a limited number, especially when prescribed at once, in full doses, sickness was occasioned. Dr. Greenhalgh stated that it had the advantage of never producing that *malaise* so frequently attendant upon the use of opium. He regarded this drug as a valuable addition to our present stock of medicinals.

Mr. GASKOIN remarked that for many years he had been aware of the employment of iodoform as a disinfectant in many parts of the Continent, but that he had been unsuccessful in obtaining much information concerning it. The objection to its general use was the expense when compared with other disinfectants.

Dr. WOODMAN said that a small quantity of iodoform is produced when the compound tincture of iodine is prescribed with liquor potassæ—a favorite combination with many country

practitioners, and considered by many to be more efficacious in the treatment of bronchoceles than iodine alone.

A CASE OF FIBROUS TUMOUR OF THE UTERUS, ATTENDED BY EARLY PREGNANCY.—RETROVERSION OF THE UTERUS AND RETENTION OF URINE.—DEATH AND DECAY OF THE FŒTUS: AND, SUBSEQUENTLY, DEATH OF THE MOTHER FROM PYÆMIA.

By J. Hall Davis, M.D., F.R.C.P.,

PHYSICIAN AND LECTURER ON MIDWIFERY AND THE DISEASES OF WOMEN AND CHILDREN AT THE MIDDLESEX HOSPITAL; PHYSICIAN TO THE ROYAL MATERNITY CHARITY.

The following case appears to me to be of sufficient pathological importance, and one so especially of interest to the obstetric practitioner, as to justify my laying it before this Society.

The subject of it was Mary Goodridge, æt. 36, a married woman. She was admitted into Middlesex Hospital on the 29th of September of the present year, into Regent's Ward. I was absent from London at that time, passing my vacation, so she was placed under the care of Mr. De Morgan.

I had, however, seen the patient once in private practice, with her medical attendant, nine days before her admission, as I shall explain hereafter.

The *state on admission*, as noted on the hospital card, is as follows—A large abdominal tumour occupies the pelvis and the abdomen up to the level of the ribs, and lying principally on the right side. The girth of abdomen at umbilicus, thirty-eight inches; general tenderness; a lobe of tumour felt in recto-vaginal pouch; cervix uteri is hard,

pressed closely behind the pubis, and drawn up. Body of uterus soft, but not very moveable; considerable tenderness on pressure. Incontinence of urine. Has lost flesh; is feverish.

Family history.—Father died fifteen years ago, but she cannot state the cause of his death. Her mother died more recently of a tumour, but of what kind she does not know. A brother was killed in action in the Crimea. She has three sisters living and healthy. Has been married five years; but she has never been pregnant, unless so now, as she suspects herself to be.

History of illness.—Her illness commenced about four months ago with morning sickness. After a short time she began to notice enlargement. The catamenia not recurring after the beginning of June, she was supposed to be pregnant.

Mr. Tyler, of High Street, Marylebone, has kindly favoured me with the following particulars. The patient first applied to him on July 18th, on account of morning sickness.

At that time there was no obvious enlargement of the abdomen. From the colour of the areola around the nipples, the morning sickness, and cessation of habitually regular menstruation without any other apparent cause than conception to explain it, Mr. Tyler suspected pregnancy. He prescribed successfully for the sickness.

The patient did not again seek advice till September 3rd. She then complained to him of great pain in the right iliac region, and of scalding in micturition. This was relieved by draughts containing potassa with opium and hyoscyamus.

September 5th.—The patient again sought advice, and Mr. Tyler now examined the abdomen, which he found larger than he expected, judging from the supposed period of pregnancy, about three months. The pain had left her; the sickness and dysuria were greatly relieved.

17th.—Mr. Tyler was sent for on account of retention of urine. On examination per vaginam, he discovered a solid

bulging substance behind the cervix of the uterus, the latter being tilted upwards and forwards against the pubis. At this date, and also when he was summoned subsequently on September the 18th, a warm bath sufficed to relieve the retention of urine. The tumour of abdomen had greatly increased.

19th.—Mr. Tyler was called up in the night again to relieve retention of urine; but the warm bath was now of no avail, and he found it impossible to introduce any sort of catheter.

20th.—Mr. Tyler accordingly requested my attendance. I found a distended bladder and a retroverted uterus, the body of which was enlarged, but the cervix was hard and undeveloped. I could not pass the catheter with the patient lying on her back or side; I therefore had her placed in a kneeling posture, with her shoulders resting on the bed. The catheter then slipped into the bladder at once, now that the neck of the bladder was by the above expedient relieved from the pressure of the neck of the uterus; the urine flowed out in a full stream to the amount of a quart, and another pint was removed at night in the same way by Mr. Tyler.

The retroversiou of the uterus seemed to me at least in part due to the pressure of an abdominal tumour upon the fundus of the uterus, the tumour probably a fibroid growth of the uterus.

I suggested the introduction of a caoutchouc hollow globe pessary into the vagina, and this to be inflated, hoping that its elastic pressure bearing upwards on the fundus and body of the uterus might prove as effectual in reducing the organ into its correct position as the same expedient had been in another case, in which I had been consulted a few days before, where a fall had occasioned a similar displacement of the gravid uterus at the fourth month of gestation.* This treatment succeeded also in the subject of our present case. After this the patient no longer suffered from retention, and

* In this a calf's bladder was substituted for the caoutchouc.

the uterus when examined subsequently in the hospital was found no longer retroverted.

I only saw this patient upon the above one occasion, and she was probably at that time but three and a half months pregnant. A few days later, Mr. Peter Gowland, of Finsbury Square, saw the patient, with Mr. Tyler, by request of the friends, on account of some of her pain being referred to the rectum, which, however, it was concluded, arose from the pressure of the tumour.

After this she was admitted into the Middlesex Hospital, presenting the condition above described. I may add that, at the time of my seeing her, there had been no discharge per vaginam of any kind.

Progress of the case in the hospital.—Being on admission in a low state, she was ordered wine, and as much strong beef-tea as she could take.

September 30th.—Great pain of abdomen; bowels confined. Sedative solution of opium, twenty minims, and castor oil.

October 1st.—Much vomiting; great abdominal pain. Ordered a linseed-and-turpentine poultice, and ice to suck.

2nd.—Sickness had ceased; pain in abdomen worse. Milk diet; sedative solution of opium, thirty minims.

4th.—Strong beef-tea.

5th.—Bowels confined; abdominal pain continues. Castor oil, two drachms; belladonna plaster to abdomen; opiate at night.

6th.—Bad night; general tenderness of abdomen; knees drawn up; vomited night-draught; much headache; pulse quick during the day, quieter at night. Linseed-and-laudanum poultice was applied to abdomen without relief. Tongue moist. A rigor occurred during the day, not followed by heat; urine passed frequently in small quantity; frequent bilious vomiting during the day. Effervescing draughts of citrate of potash, with dilute hydrocyanic acid and tincture of opium, given every four hours.

7th.—Sickness ceased after the draughts, but returned this morning. Pulse small and running; tongue furred,

yellow, but red at tip and edges; skin hot. Pain in uterine region, which prevents her sleeping. Pain in chest, and cough. Frequent desire to pass urine, which comes away in small quantity. Bowels not open since the day before yesterday, after oil; drowsy. Linseed-and-mustard poultices to chest. Mercurial and belladonna ointment to abdomen; soda-water as required; wine, four ounces; brandy, six ounces.

On October 11th, Dr. Meadows, who was acting for me during my absence from town, was now requested to see the patient, and give his opinion about the abdominal tumour and condition of the uterus. The very rapid growth of the tumour, and the accompanying offensive discharge, had, I understand, raised a suspicion of its malignancy.

Dr. Meadows found the neck of the uterus drawn up above and behind the pubis. He could easily introduce his finger into the orifice of the uterus. The uterine sound passed five and a half inches without opposition upwards and forwards. The cavity of the pelvis was found occupied by a solid tumour, a separate lobe of which was found to be lodged in the cavity of the sacrum. There was great sickness, and very offensive discharge from the uterus, which Dr. Meadows ascertained by the sound to be enlarged, but not to be retroverted. Its enlargement, he supposed, was due entirely to the tumour.

October 8th.—Bilious vomiting continues; all drinks produce a burning sensation in the stomach; much flatulence; cough troublesome; mouth parched; pulse feebler and quieter; urine passed more freely; pain in loins and abdomen; bowels not open; tongue coated; skin normal; less urgency to micturate. Soda and gray powder, ten grains; peppermint-water one ounce every four hours; ice to suck; soda-water. Dozed during night, after subcutaneous injection of morphia, one third of a grain. Great pain in abdomen this morning; sickness has abated; bowels have acted; tongue coated at back. Takes no nourishment; great thirst; skin normal. Has taken four of the powders, which have kept down. Brandy, six ounces.

9th.—The vomiting continuing, oxalate of cerium, five grains, was given every six hours.

10th.—Sickness less; great pain in back. The patient moans; face more anxious. Soda-water; belladonna plaster to loins; brandy, six ounces.

Midnight.—In great pain; much moaning. Subcutaneous injection of morphia, half a grain.

11th.—Passed a good night after the morphia injection; but pain and moaning returned this morning, with slight sickness. Brandy; injection of morphia, half a grain, immediately; soda-water.

Midnight.—Pain, moaning, and sickness continue; face pinched and anxious, eyes sunken. Pulse small, wiry; pain in region of stomach, extending through to back. A crop of small blebs have appeared on the abdomen. Bowels not open. Took some chloroform on sugar; injection of morphia, two thirds of a grain.

12th.—No sleep followed injection; constant sickness during the whole night of dark green bile, with a dark brown sediment and mucus; face flushed; hands cold; skin elsewhere hot, perspiring; bowels not acting; urine scanty. Pulse feeble, 120. Tongue coated yellow at back. A fresh crop of blebs appeared on the abdomen during the night. Pain in lumbar region still complained of. Soda-water; brandy; arrowroot. Subcutaneous injection of morphia, two thirds of a grain, in lumbar region.

13th.—Restless night. Has slept this morning. Skin normal. Drowsiness; cough, with mucous rhonchus. Tongue moist, coated at back; bowels not open. Sickness has much abated; urine scanty; pain much less; face less anxious; tenderness of abdomen continues.

14th.—Had a pretty good night. Face, nevertheless, very anxious and pinched; skin hot; aching pains all over the body. She lies in a drowsy condition, with eyes upturned. Slight delirium for the last two or three days. Urine passed involuntarily; sickness abated; occasional hiccup, with eructation of flatus; expectoration of mucus; vesicles on abdomen have subsided. Pulse soft and regular;

tongue moist and cleaner; knees drawn up; coughs occasionally. Brandy, six ounces; soda-water; subcutaneous injection of morphia, one grain.

15th.—Face hollow, anxious; knees drawn up; less restless; lips dry; tongue glazed and dry; mouth parched, great thirst; urine dribbles away; bowels not open. Brandy and soda-water.

16th.—Belladonna ointment to abdomen, on account of the pains. Continue the brandy and soda-water.

17th.—Great pain during whole of last night; no sleep. Pulse 100, fuller; tongue glazed; knees drawn up; right cornea, lower border, sloughing. No sickness since the 13th. Dribbling of urine continues; bowels relaxed last night and this morning. Subcutaneous injection of morphia, one grain, immediately; soda-water, brandy, enema of starch and opium.

18th.—Flooding began at 5.45 p.m.; pulse feeble; face anxious; eyes upturned; tongue glazed; surface warm. Ice passed into the vagina, and ice-bag applied to hypogastrium. Iced water given to drink.

8 p.m.—The foot of a fœtus presenting, and cord down in vagina. Occasional labour-pains.

8.30 p.m.—A fœtus of about four months' growth, but decomposed, was expelled; the cord, softened by putrefaction, broke off, leaving the placenta in the uterus. The patient being much reduced, and the os uteri being closed, the pulse tremulous and intermittent, it was decided by Mr. Ferguson, my obstetric assistant, who was attending on the case, to trust to the action of ergot rather than to introduce the fingers into the uterus to remove the placenta by extraction, which would have necessitated first the dilating of the os, and therefore much irritation of the patient. Ergot was accordingly given with brandy, but the placenta was not expelled.

11 p.m.—Injection of beef-tea and brandy was given at 10, and another at 11; both retained. At 11.45 the bowels were opened. Pulse still tremulous and intermittent; hands

cold; respiration quick; no hæmorrhage; occasional pains, patient then relapsed into a kind of doze.

19th.—Has had an injection of beef-tea and brandy every two hours, up to 9 this morning. Bowels open twice since midnight. Has been fed with brandy and milk at frequent intervals during the night. No uterine hæmorrhage externally. Has now hurried breathing, chiefly thoracic; mutters occasionally; pulse scarcely perceptible at the wrist; deglutition difficult; lies with legs flexed on abdomen.

Death took place at 1 p.m.

Post-mortem examination, by Dr. Cayley, made twenty-five hours after death, October 19th, 1865.—Body somewhat emaciated; rigor well marked; a little post-mortem discoloration of the surface of the abdomen.

Thorax.—Pleuræ normal. Lungs anæmic in front, and congested behind, but everywhere crepitant. Pericardium normal. Heart of moderate size; all the cavities contained yellow fibrous clots, and a little black blood and loose black coagula; the valves were normal. The thoracic portion of the œsophagus appeared somewhat dilated.

Abdomen.—The greater part of the abdominal cavity was occupied by a hard, kidney-shaped tumour, which lay across it, extending from the brim of the pelvis to the ribs. This tumour measured nine inches in its longest diameter, which was from side to side, and six inches in its shortest, which was from above downwards; and its lower border presented an inflection which resembled the hilus of the kidney, and here it was attached by a very short pedicle, three inches in circumference, to the posterior part of the fundus of the uterus. The anterior surface of the tumour was adherent for a short space to the abdominal wall, but there were no marks of recent peritonitis. The intestines lay above and around the tumour. The uterus and bladder appeared dragged upwards by it. The uterus itself was slightly enlarged, elongated in form, and its length from os to fundus was four inches. The cavity was enlarged, and filled up by a placenta which adhered to the fundus, and

by a large clot of blood which projected through the dilated orifice of the uterus into the vagina. The walls of the uterus were one and a half inches in thickness. Imbedded in the wall of the uterus was a fibrous tumour, of the size of a small walnut; and bulging on its surface, without pedicles, were three or four small fibroid outgrowths. Moreover, attached to the lower part of the body of the uterus, where it adjoins the neck, towards the right side, was another fibroid outgrowth, of about the size of a moderate-sized orange. The bladder was dilated; the mucous membrane at the base much injected and rough. Both ureters were dilated, and also the pelves of the kidneys; the left was filled with a purulent fluid. The dilatation was greatest on the left side. The left kidney was shrunken, its capsule adherent, surface granular; and in its substance were several little purulent deposits, some projecting from the surface, others imbedded in the cortex and cones. The right kidney was less altered; it was of moderate size, and the capsule was normal, but it also showed on section several purulent deposits. The other abdominal organs were normal; the ovaries were normal.

On making a section through the large tumour, it presented all the characters of a uterine fibroid; and near its upper surface was a small, irregular cavity, containing a small quantity of dark brown serum. The substance of the tumour was firm, tough, somewhat elastic, and the sectional surface presented to the naked eye wavy fibres and interposed granular matter.

Lungs—right, nineteen ounces; left, sixteen ounces: heart, eight ounces; liver, fifty ounces: kidneys—right, five and three quarter ounces; left, four and a half ounces. The conjoined weight of uterus, ovaries, and tumour was six pounds.

The peritoneum presented no traces of peritonitis. The cornea, on the right side of its lower border, was in a sloughing state.

Conclusion.—The rapid growth of the tumour (very unusually so for a fibroid tumour) appeared to be due to the

active determination of blood to the uterine organs during pregnancy. The retroversion was produced by its downward pressure on the fundus; but this was remedied by the caoutchouc pessary.

At some time prior to the entry of the patient into the hospital the fœtus died, and the circulating blood may have become so far poisoned from that source as to explain the constitutional disturbance with which the patient entered the hospital, and which of course continued increasingly in operation up to the patient's death. The purulent deposits in the kidneys, and the sloughing of the cornea, may be referred to the same influence.

It must not be lost sight of, that the retention of urine which the patient had borne with patiently as long as she could before seeking advice, might have contributed some influence in inflaming the kidney, and causing chronic inflammation of the mucous membrane of the bladder, and it led to the dilatation of the ureters and of the bladder.

This case, which presented to those who saw it in the hospital such obscure evidence of pregnancy might, had it been treated by dilatation of the os uteri and removal of the decayed fœtus and placenta on the appearance of putrid discharge, possibly have ended in a slow recovery.

I believe, in all cases of constitutional disturbance apparently due to putrescence of uterine contents, it would be a prudent practice to dilate the os till the fingers can be introduced, so as to remove the putrescent substance, whether a fœtus, a mole, a decaying polypus, or fibroid growth.

Two cases of fibroid growths in a decomposed state, causing fever, vomiting, delirium, flooding, &c., have come under my care in the Middlesex Hospital. The os was dilated, the putrid contents of the uterus were removed, and the patients were restored to tolerable health.

The treatment of the above case, which consisted in meeting the different symptoms of disturbance as they arose by the various medicines and dietetic remedies exhibited, was the only one which could have been pursued so far,

and temporary alleviation was thus obtained of most distressing symptoms on many occasions; but I think this case may serve a useful purpose in directing us, in all cases where severe constitutional disorder coexists with putrid discharge from the uterus, not proved to be of cancerous origin and irremediable, to endeavour to remove the cause which keeps up such discharge, and is most probably the occasion of such constitutional disturbances.

At the post-mortem inquiry it was proved, by the narrowness of the pedicle and almost entire freedom of the tumour from adhesions, that it might easily have been removed after opening the abdomen. The other tumours, however, would have remained, and probably, had the patient survived, would have subsequently enlarged. However, at no time while in hospital was she in a condition to bear so severe an operation, even had it not been contra-indicated by the putrid discharge from the uterus.

Dr. Routh said the case was important, viewed in the aspect of what should be done in such cases—*i. e.*, when we had abdominal tumours and pregnancy coexistent. The post-mortem examination revealed a large fibroid extra-uterine, with small pedicle; precisely the case most favorable for gastrotomy. Should this patient have been operated upon before labour had taken place, or should labour have been prematurely induced first? He thought the latter: First, because it commonly happened that when abdominal tumours, whether ovarian or uterine, but especially if fibroid, were operated upon before labour, a miscarriage or premature delivery occurred; occasionally death. Secondly, if premature labour was induced, then not only was diagnosis made more easy as to the exact nature and bearings of such a tumour, but the impetus given to its rapid growth by pregnancy was removed.

Dr. Wynn Williams remarked that in a case that came under his care at the Western General Dispensary, he introduced the sound for the purpose of inducing premature labour. The case so far differed from the one related, in being an intra-uterine tumour. A patient consulted him at the dispensary, stating that she had not menstruated for three years, and that during that time she had perceived some enlargement of the abdomen, but more so latterly. There was considerable fœtid discharge from the uterus. He diagnosed intra-uterine tumour with subsequent

pregnancy, fœtus dead. He introduced the sound into the uterus, moving it freely about, for the purpose, as before stated, of inducing labour. Labour soon set in, the patient being delivered by the midwife of a still and partially putrid fœtus, together with the tumour. Unfortunately, both tumour and fœtus were destroyed, and he had no opportunity of inspecting them. The patient made a good recovery, without a bad symptom.

Annual Meeting.

THE Report of the auditors of the accounts of the Treasurer for the year ending Dec. 31st, 1865, was read, from which it appeared that the balance in the hands of the Treasurer was £234 18*s.* 8*d.*, and the amount invested in Consols £881 10*s.*, representing in Three per Cent. Annuities £955 15*s.* 1*d.* The amount received for the subscriptions of Fellows during the year was £425 5*s.*, and for the sale of the 'Transactions' £69 4*s.* 7*d.* The amount invested in Consols during the year was £150.

Dr. TYLER SMITH moved the adoption of the report, and warmly congratulated the Society on its present very flourishing condition.

Mr. MITCHELL seconded the resolution, which was carried unanimously.

The following Report of the Hon. Librarian was then read:

"It could hardly be expected, perhaps, that the first year of the opening of our Library would exhibit any very great results as regards its popularity, as indicated by the use which is made of it by the Fellows of the Society. Accordingly, I find that during the past year only about sixty volumes have been lent out to about twenty Fellows. It must be remembered that at present the Library is not in a very efficient condition, at least as regards modern works.

But the remedy for this defect rests to a great extent with the Fellows themselves; for, notwithstanding the desire of the Council to increase the value of the Library by the purchase of such new works as are recommended by the Fellows in a book kept for that purpose in the Library, only £5 1*s.* 7*d.* has been so expended during the past year. I cannot but think that a fair portion of our yearly surplus might be most advantageously spent in this way to the rearing up of a Library of great usefulness and value to the Society, and such as might indirectly increase our prosperity by becoming an attraction to new members.

One other suggestion I would venture to make, though it does not, perhaps, strictly belong to this report: it is as to the desirability of starting, in connection with the Library, a Museum of Morbid Anatomy. During the course of each year a large number of extremely interesting and valuable specimens are exhibited at the Society's meetings; and I do not doubt that the possessors of those specimens would in most, if not all cases, gladly present them to the Museum if this suggestion were carried out. Indeed, I know that in some cases, specimens, especially if of a cumbrous or otherwise inconvenient nature, are left in the Society's rooms by their owners, to the great discomfort of the manager, Mr. Wheatley. Considering that full details of these specimens, and the cases whence they were taken, are carefully stored up in our 'Transactions,' it would seem to enhance the value of the latter if the specimens themselves were also preserved and easy of access.

There need be no great expense incurred in adopting this suggestion: the glass jar, the spirit, and the labour of preparation represent the total outlay, at least for some time to come; and it would, I submit, be insignificant in comparison with the results.

The entire cost of the Library during the past year was £61 3*s.* 5*d.*, more than £16 of which was for incidental expenses connected with its formation, and £40 was for rent.

The number of volumes presented to the Society during

the past year was upwards of sixty, making a total of nearly 900 volumes.

On the recommendation of the Honorary Librarian, the Council authorised the publication of a Classified Catalogue, which each Fellow will receive with the forthcoming volume of 'Transactions,' and which, it is hoped, will prove of great service.

In conclusion, I venture to express the hope that, by a liberal but judicious expenditure in the purchase of new works, as well as by the presentations of the Fellows' own works, our Library may eventually become worthy of the Obstetrical Society of London."

(Signed) ALFRED MEADOWS, M.D.,
Hon. Librarian.

Dr. GREENHALGH moved that the report be received and adopted. He warmly commended the suggestion of the establishment of a Museum, and offered a donation of five guineas towards a separate Museum Fund, and a similar sum towards a Library Fund.

Dr. WYNN WILLIAMS seconded the resolution, which was unanimously carried.

Moved by Dr. GRAILY HEWITT, and carried—"That a limited number of medical students, each bringing a recommendation from his lecturer in midwifery, be admitted to the ordinary meetings of the Society, without privilege of participating in the discussions." Applications to be made to the Honorary Secretaries.

Dr. MARTYN proposed, and Dr. CORY seconded—"That the best thanks of the Society be and are hereby given to the President and Officers of the Society for their services during the last year; and that the special thanks be given to Dr. Braxton Hicks, the retiring Honorary Secretary, for the very efficient way in which he has discharged his duties."

The PRESIDENT (Dr. Barnes) and Dr. BRAXTON HICKS respectively returned thanks.

The report of the scrutineers was read, and the following

gentlemen were elected Officers of the Society for the year 1866 :—

Honorary President.—Sir Charles Locock, Bart., M.D.

President.—Robert Barnes, M.D.

Vice-Presidents. — Dr. Gream, Dr. Greenhalgh, Mr. Haden, Dr. Hicks, Dr. Hall (Brighton), Dr. Wilson Glasgow.

Treasurer.—Dr. Graily Hewitt.

Hon. Secretaries.—Dr. Meadows, Dr. Murray.

Hon. Librarian.—Mr. James Reeves Traer.

Other Members of the Council.—Dr. Aveling (Sheffield), Mr. Thomas Bryant, Dr. Earle (Birmingham), Dr. Eastlake, Dr. Gervis, Dr. Leishman (Glasgow), Mr. Mitchell, Mr. Newton, Dr. Oldham, Mr. Oldham (Brighton), Dr. Timothy Pollock, Dr. Priestley, Mr. Ray, Dr. Richards, Dr. Skinner (Liverpool), Dr. Tyler Smith, Mr. Wm. Squire, Mr. Symonds (Oxford).

The PRESIDENT then delivered the following

ANNUAL ADDRESS.

In accordance with annual custom, it is my part to sum up briefly the year's history of our Society. As in every preceding year, our progress has thoroughly vindicated the sagacity and enterprise of the founder. We now form a body of 500 Fellows. Association with us is still eagerly sought; our 'Transactions' have obtained an honorable place in obstetric literature, carrying abroad the experience and the doctrines of English practitioners, and bringing back to us in exchange the good-will and the teachings of our fellow-workmen in every part of the globe. Last year the sale of our 'Transactions' brought in £69 4*s.* 7*d.*—a sum greater than in any preceding year. It was more than enough to defray all the expenses of our Library.

Our finances are in a sound and thriving condition. Hitherto we have had an annual surplus, which in the early

career of the Society it has been deemed prudent to invest in the Funds; but now our position is safe, and it will probably be our best policy to devote more money to the promotion of the objects for which our Society was founded. Even our material prosperity may be more effectually advanced by expending some of the money we can spare to the extension of our Library, and to other means of storing and diffusing obstetric knowledge. We are not a commercial company or a club; and being now able, we think it our duty to put out our money at scientific interest. There is nothing so fruitful as knowledge spread abroad; its prolific energy is, indeed, boundless; it gathers strength and increases at an infinitely quicker rate than does capital in the Three per Cents.; and the profit is not selfish: it is shared in by our professional brethren throughout all the world, and redounds to the benefit of all mankind.

It has never before fallen to the lot of your President to have to record so long a series of losses by death. The duty of commemorating the lives of associates, especially if they were also personal friends, must always be a painful one; but the pain is softened by the reflection that the task imposed upon me has for its object to gather up the scattered records of good deeds that cannot die, and to present them as an encouragement and example to others.

Frederick William Mackenzie, M.D. of the University of London, and member of the Royal College of Physicians, died at the age of forty-nine, at his house in Chester Place, Hyde Park Square, on the 3rd April. Dr. Mackenzie, at the time of his death, had ceased to be a Fellow of our Society; but he was amongst the first to unite in its foundation. He was a member of our first Council, assisted at our discussions, and contributed to our 'Transactions.' On account of this association with us, and his other remarkable services to obstetric science, and moved somewhat, I confess, by the memory of a long-cherished personal friendship, I ask for him a place in the annals of our Society. The following brief memoir of Dr. Mackenzie was contributed by me to the 'Lancet' in April, 1865:—

"Few men have given more early or greater promise of acquiring distinction. As a student at University College, he was unsurpassed in the competition for honours. His capacity for close application and the powers of his memory were marvellous. To contend against him for a prize was to engage in a desperate struggle. The copious store of knowledge he had acquired always found orderly and fluent exposition. The fulness of his answers made his papers complete essays on the questions set. In addition to the largest collection of gold medals it was possible to win at college, he earned special approbation on passing his examination at the Apothecaries' Hall. He was one of the earliest graduates of the University of London, where the gold medal for passing the best examination in medicine was awarded to him in 1841. He settled in general practice in Bayswater, and afterwards removed to the house in Chester Place, Hyde Park, where he died. He was successful in the line of practice he adopted. That success was unfortunate both to himself and to science. Rare accomplishments, irresistible impulse to indulge in original research, and ambition, marked him as a man who ought to have been a teacher. Even without the advantage of the professorial chair he made for himself a reputation, not inconsiderable indeed, but still far below his merits. His memoir on 'Phlegmasia Dolens,' in the 'Medico-Chirurgical Transactions,' and his Lettsomian Lectures on the same subject, delivered before the London Medical Society, are models of sagacious experimental research and of clinical criticism. In these contributions he has probably done more than any other observer to define the true pathology of phlegmasia dolens. He published numerous other memoirs on medical questions, but still his best studies were directed to obstetrics. He had, in the earlier stage of his career, been selected to edit the lectures of the late Professor Davis. Dr. Mackenzie was one of the first Fellows of the Obstetrical Society of London, and in the early meetings took an active part in the discussions, and published a memoir in their 'Transactions' on 'Turning after Craniotomy.' His mind was

eminently suggestive and exhaustive. He could not touch a subject without tracking out all its relations and opening out fresh paths of investigation. Hence, perhaps, a want of terseness in his style, which was, however, relieved by the richness of the information he brought forward upon every topic. In 1855 he took a step which he ought to have taken ten years earlier. He became a member of the College of Physicians, and thus bid for a position in the ranks of consulting practitioners. He was elected Physician to the Western General Dispensary, and later to the Queen Charlotte's Lying-in Hospital. He was a candidate for more than one of the chairs of midwifery which, within the last few years, have fallen vacant at the hospital schools. It is no derogation to his competitors—even to the successful ones—to say that in him claims of the highest order were passed by. The explanation, perhaps, is that Dr. Mackenzie had not entered the lists of those who were aspiring to consulting practice sufficiently early in life. Although still young, and animated with far more zeal for honest work than many younger men, he had let slip the golden opportunity. The tide had turned, and had led other men on the road to fortune. Not ignorant of his own merits, he was singularly diffident. It was many years before he acquired courage to take part in discussions at medical societies. When at last, impelled by the example of friends, he did so, it was found that his power of oral exposition was as fertile and correct as that he had often proved himself to possess in his pen. Another element of Dr. Mackenzie's character was an exaggerated sensitiveness. He felt keenly, too keenly for one who enters on the rough course of modern professional competition, the disappointments and rebuffs that make but an evanescent impression on sterner natures. Gentle in his bearing, tender, sympathising, he could not fail to enlist the warmest feelings of his patients as friends. Some time ago he lost his wife. He never recovered from the shock, which destroyed hopes and happiness far dearer to him than even the professional distinction he had so much coveted. His friends

believed that this sad blow was the remote cause of his death. He leaves an only son, but many friends, to deplore the loss of a spirit tender as a woman's, and of an intellect rich, capacious, and suggestive beyond ordinary measure."

Edwin E. Day, M.B. of the University of London, and Member of the Royal College of Physicians, died on the 7th April, at his house in Hertford Street, Mayfair, at the early age of twenty-nine. He contributed to our 'Transactions' an interesting case of "Extra-uterine Fœtation, followed by intra-uterine pregnancy, for which premature labour was induced." I had not the pleasure of being personally acquainted with him, and I draw the following sketch of his short career from the 'Medical Times and Gazette' of April 22nd:—He was the only son of Mr. Day, who for many years enjoyed an extensive practice at Acton. He was a student at King's College, where he gained the gold medal for general proficiency. He at first took up his father's practice at Acton, but soon removed to London, determined to try his fortune as an obstetric physician. He was appointed Assistant Obstetric Physician to King's College Hospital on the resignation of Drs. Tanner and Meadows. He worked hard amongst the poor as physician to the Farringdon, and St. George's, and St. James's Dispensaries. To this toil in an unwholesome atmosphere his constitution was little adapted. He lost the freshness and vigour of health; and at last, on the 23rd of March, after assisting at the post-mortem examination of some puerperal cases at King's College Hospital, he took to his bed with erysipelas of the head and face. This was succeeded by (it is so described) acute rheumatism and pericarditis, under which he succumbed on the 7th of April.

Decimus Nelson Frampton was a M.R.C.S., Consulting Surgeon-Accoucheur to the Pimlico Lying-in Charity, and formerly Surgeon-Accoucheur to the Pimlico Dispensary.

Arthur Octavus Arden, of Hull, was a M.R.C.S., Lecturer on Materia Medica at the Hull School of Medicine, and had

filled the office of Accoucheur to the Hull Lying-in Charity. He died on the 22nd of July, at Hull.

Thomas Herbert Barker, M.D. Lond., F.R.C.S., died on the 24th October, at Bedford. For a great part of the following record I am indebted to a biographical memoir of this distinguished practitioner which appeared in the 'Lancet' of the 28th October. He died of typhoid fever, at the age of fifty-one. He was well and widely known as a man possessing no less of physical than of mental power; but, impelled by irresistible love of work and of knowledge, he habitually overstrained both body and mind. A few years ago he began to suffer from irregularity in the action of the heart. But he continued his active career until within three weeks of his death. He had contracted typhoid fever. Dr. Barker's career was one of singular interest. He won his eminent position entirely by his personal energy and intellectual merits. His contributions to general science obtained for him the Fellowship of the Royal Society of Edinburgh. He won the Fothergillian gold medal of the Medical Society of London for an essay on Malaria. This essay was based upon an original and most valuable series of experiments, illustrating the influence of sewage-gases upon animals. He only recently obtained the Hastings prize of the British Medical Association. Dr. Barker was a type of the highest order of country practitioners. He was skilled in every branch of the healing art; a cool and skilful operator, a sagacious physician, and an admirable obstetric practitioner, he was prepared for every emergency in practice. But his irrepressible energies could not find full occupation in the scientific and practical duties of his profession. For many years he was the foremost, as he was always one of the most unflagging, of the contributors to those laborious meteorological observations on which the late Admiral Fitzroy based his famous system of storm-signals. Some years ago the meteorologists of Great Britain presented him with a handsome chronometer in recognition of his distinguished labours in their department of science. He was also well versed in astronomy, and devoted much

time to practical observations of the heavens. He took great interest in the study of the history of medicine—a subject deserving far more attention than it now receives, when it is commonly, but not seldom, erroneously believed that the extent, accuracy, and brilliancy of modern discoveries have rendered the knowledge of our predecessors useless. But even if we believe that old discoveries are imperfect, and that old doctrines are obsolete, still it is not just to disregard the labours of those who cleared the ground and paved the way for our own presumed more perfect observations and sounder doctrines. As Laplace has well said, "A knowledge of the method adopted by the man of genius is quite as beneficial to the progress of science, and even to his own fame, as are his discoveries." If this be true, then it is a matter of more than mere literary curiosity to preserve records of the lives of men who acquire distinction in our profession. As it is certain that the materials for such records can rarely be obtained or verified when the men have passed away, so Dr. Barker was amply justified in the enterprise which he started, under some discouragement, of publishing a biographical series of the eminent medical men of his own time, hoping, as he expressed it, "to throw into the future a faithful representation of medicine as he saw it." And no man was better fitted for the task. I should be glad indeed were I able to commit to our annals a biography more worthy of him who entertained so just an idea of what was due to the fame of others.

It only remains now to mention the chief facts connected with Dr. Barker's association with us. He was one of our first Fellows. He had been a referee of papers, and an honorary local secretary; he had contributed to our 'Transactions' an interesting example of that rare accident, "Annular Laceration of the Cervix Uteri during Labour." This paper is published in the second volume of our 'Transactions.' We have lost in him a friend who was always ready to answer the call for work. He was truly one of those who knew no rest but in change of labour.

Henry Merton Gould, of Wateringbury, Kent, was a

M.R.C.S. He died on the 21st of November, aged sixty-one.

Charles Saunders, M.R.C.S., of Foulsham, Norfolk, died on the 3rd of November, at the age of fifty-one.

Dr. William Bloxam, the father, died on the 5th of November last, at his house in Duke Street, Grosvenor Square, aged sixty. The memory of his name raises an emotion that cannot be satisfied by a mere formal record. It was from him that I drew my earliest, and not the least valuable, instruction in obstetrics. I find it difficult to do justice to his great merits as a teacher and as a practitioner. Indeed, it was always a matter of regret to his friends that he did not do justice to them himself. So sterling were these merits, that had he fairly entered the lists of competition for consulting obstetric practice, his success must have been decided. Very few men were better gifted by nature; still fewer were so well qualified by extent and accuracy of theoretical study, or by experience in difficult midwifery. He was educated at Rugby, and succeeded to the practice of the surgeon to whom he had been apprenticed. After several years of country practice he came to London. Very early in life, whilst still an apprentice in the country, he had attended a large number of cases of labour. He became associated with the late Dr. Jewell as Lecturer on Midwifery at the school in Little Windmill Street, then conducted by Mr. Gregory Smith; and also as obstetric surgeon to the Royal, afterwards the Queen Adelaide's, Lying-in Hospital. This institution had been established as a practical school of midwifery by Dr. Jewell, and for many years occupied a house in Queen Street, Golden Square,—I believe the same house in which Dr. Denman had lived. When Dr. Jewell retired from practice, Mr. Bloxam was joined as co-lecturer at the school, and as physician to the hospital, by Dr. William Andrews, who practised for some years in Golden Square, and afterwards took holy orders, and died recently in Norfolk.

It will not, I hope, be thought out of place, if I take this opportunity to close the history of Queen Adelaide's Lying-

in Hospital. It differed from the other lying-in hospitals of London in this respect, that it was essentially a practical school for the instruction of medical men. All the out-patients as well as the in-patients were attended by medical students or practitioners. For several years, during two of which I resided in the hospital as house-surgeon, pupils came to it from all the hospital schools of London. At that time (twenty-five years ago) it clearly supplied a great want in our educational curriculum. The medical schools did not afford adequate means for acquiring obstetric skill; and many men who had just taken their diplomas, and not a few of mature years, came to us for practical instruction. When Mr. Bloxam and Dr. Andrews resigned their connection with Queen Adelaide's Hospital, it was kept afloat for awhile by the late Dr. Yell, greatly by his own resources. But the claims of obstetrics to hold rank with medicine and surgery proper as an integral part of our curriculum, gradually received fuller recognition; obstetric physicians became attached to the staffs of our general hospitals; the examining boards required evidence from candidates of having attended cases of midwifery; and more ample provision for practical instruction was made by creating or extending lying-in departments in direct connection with the hospital schools. The mission of the Queen Adelaide's Lying-in Hospital was accomplished, and it dropped from the list of our London charities some few years ago.

When Mr. Gregory Smith removed to Harewood, the Windmill Street School was given up, the pupils were transferred either to St. George's Hospital or to Mr. Lane's School, in Grosvenor Place, and Mr. Bloxam became lecturer on midwifery at the latter institution. In this office he was, at a later period, aided by Dr. Priestley, and more recently by his son, Dr. William Bloxam. When the Grosvenor Place School—the last of the private schools in London—was given up, Mr. Bloxam ceased to lecture. He was for many years surgeon to St. George's Infirmary. Mr. Bloxam was a zealous and skilful anatomist. Whilst a very young man he published a work entitled "Illustra-

tions of the Surgical Anatomy of Inguinal and Femoral Hernia." He contributed a memoir "On the Structure of the Placenta" to the 23rd vol. of the 'Medico-Chirurgical Transactions.' This memoir was the result of infinite practical investigations. I doubt whether any one else ever injected so many placentas as did Mr. Bloxam in the course of these inquiries. The memoir itself is modest in pretension, and bears small proportion in bulk to the great anatomical skill, sagacity, and extensive observation devoted to the preparation of it. It describes very clearly the nature of the connection between the uterus and the placenta. It is eminently a trustworthy description. It is conspicuous for caution in not stating more than the author saw, and in resisting the temptation to build up conclusions upon unsettled foundations. He was also the author of the "Cyclopædia of Practical Surgery," and editor of the "Medical Argus."

To Dr. Bloxam's merits as a teacher many others as well as myself will bear grateful testimony. Clear and accurate in exposition, learned in the knowledge of others, and well trained by personal experience, possessing a vigorous and independent intellect, his lectures were always attractive and instructive. In 1859 Mr. Bloxam took the degree of M.D. at St. Andrew's; and it is a striking proof of the earnestness with which he had cultivated medical science that, in mature years so accurate was the knowledge he brought to the examining board, he came out first in honours against young men fresh from the schools. Dr. Bloxam was one of the first Fellows of our Society, and was a member of the Council in 1860. He leaves three sons, one of whom, Charles, is professor of practical chemistry at King's College, London; another, Dr. William Bloxam, is a Fellow of our Society; and the third, Matthew, is also a member of the medical profession.

Our last loss is so recent and so sudden, and the shock so painful, that the mind even yet hesitates to realise the blow. Dr. Charles George Ritchie was a most constant and zealous fellow-workman amongst us. His cheerful and

animated manner, glowing with hope and life as he was, his ready elocution and great attainments made it always a pleasure to see and hear him.

The following excellent sketch is borrowed from the 'Lancet' of last week:—

"Dr. Charles G. Ritchie was the only son of the eminent physician and professor at Glasgow. He graduated in the university of that city, and became a licentiate of the Faculty of Physicians and Surgeons. Devoting himself especially to the study of midwifery and its kindred branches, he forthwith entered on an extended course of special training; manifesting throughout talents of such high order that all who met him prophesied a brilliant future for the zealous and gifted young worker. He studied a year at Paris under Dubois and Pajot; was at the great Lying-in Hospital at Vienna for eight months, and went to Würtzburg to study under Scanzoni, and attend Kölliker's course of lectures on embryology. On returning to Scotland he attended Dr. Simpson's classes, and subsequently became one of his private assistants. He then held the post of resident physician to the Royal Hospital for Sick Children in Edinburgh, and came to reside in London in the autumn of 1863, being then only twenty-one years of age.

"He possessed, in an eminent degree, all the qualifications requisite for success in that branch of the profession which he had adopted. A perfect gentleman in appearance, manner, and feeling, he had the happy gift of inspiring a confidence which his great professional acumen and skill fully justified. His personal accomplishments, his genial happy disposition, and his courteous manner, soon gained him many influential friends, and those who knew him best loved him most. He worked incessantly, but always with his heart in his work; so that he never seemed to tire—poring over the pages of ancient medical writers, for the quaint and crabbed diction of the old Greek and Latin books was no impediment to him—noting with eager scan the latest French and German observations, for he was an excellent linguist—labouring with the scalpel and the

microscope, for constant practice had given him an exceptional manipulative skill and neatness—penning scientific contributions on many subjects, for he possessed the happy power of writing good English, putting clearly and precisely what he had to say. He contributed to the last volume of our 'Transactions' a memoir 'On the operation of Cephalotripsy as performed at Vienna by Professor Braum,' and wrote an admirable essay 'On the Mechanism of Parturition' in the 'Medical Times and Gazette.' His 'Obstetrical Reports,' and the comprehensive and valuable treatise on 'Ovarian Pathology,' which appeared only this year, were but the firstfruits of labours which he was not destined to carry on to their full fruition. Dead ere his prime, suddenly cut off in the very flush of a young and noble life, the news of his death came as a great shock to the large circle of professional and private friends, who loved and respected him for his personal qualities and sterling worth, and who confidently anticipated for him a bright and successful career.

"Dr. Ritchie was with some attached friends until late on the evening of Thursday, December 21st, bright and happy as was his wont; perhaps more elate than usual at the prospect of spending the Christmas in Glasgow, intending to leave London on the following day.

"He went to his residence in Mount Street. Mr. T. Spencer Wells was hurriedly summoned on the following morning, and found him in bed and insensible. He never recovered consciousness, and died early in the afternoon of Friday.

"After a fatiguing day, he had probably been too tired to sleep, and so poured out for himself a dose of solution of morphia. But he took up a bottle of a very powerful solution, which he had been using for hypodermic injections, and swallowed a poisonous amount.

"He was not quite twenty-four years old at the time of his death. The sympathies that will go out from the heart of the profession towards the bereaved father can afford but little consolation; yet the profession have a claim to share

his grief, for they also have sustained a great loss in the death of this estimable young physician."

Thus ends the sad list. The dark door of death is closed upon our companions, but only their bodily presence is lost. Their work and their memories remain. These survive as a part of the great and enduring life of our Society, which, ever sustained by fresh recruits, knows not the decay which is the lot of its individual members.

Let us look, then, to the future. Every Fellow will have received a circular respecting the projected Exhibition of Obstetric Instruments which I announced at our meeting in November. This Exhibition, if carried out according to our design, cannot fail to be interesting and instructive. By bringing together the instruments that have been used in different ages and in different countries for the purpose of overcoming those obstetric difficulties which are met with in all ages and all countries, we shall be able to read by these tangible symbols the most important chapter in the history of obstetrics; we shall be able to enter into the thoughts of other men, our predecessors and contemporaries, by studying the visible expressions of their minds labouring in the cause of our common science; we shall be able to do something towards identifying and preserving the original forms of instruments as they were designed and used by their inventors. An instrument is not less the offspring of a man's mind than is a book; but the security for preserving an instrument so that it shall, even for a brief time, tell truly the working of the mind that produced it, and continue to answer, in the hands of others, the purpose for which it was designed, is very much less than in the case of a book. Books are at once multiplied, and copies are deposited in libraries, where they are stored for future reference; but instruments are not struck off in numbers from one mould: the first maker follows a model or instructions more or less exactly; subsequent makers may copy the errors and deviations from the original model, taking these errors as essential points; and successive practitioners may contrive endless modifications, so that from a variety

of accidents it may, and indeed continually does happen, that the greatest difficulty arises when we attempt to ascertain the right form of an instrument, and to refer a particular discovery to the rightful owner.

Considerations such as these suggested to me the idea of instituting this Exhibition. I am happy to say that it met with the cordial approval of the Council, and that the College of Physicians have, in the most liberal spirit, allowed us to hold the Exhibition in their building. We shall endeavour to preserve a scientific record of the specimens sent to us; a *catalogue raisonné* will be drawn up, and drawings will be made to represent such ancient and rare instruments as cannot be procured for actual exhibition. Let us hope, also, that we shall lay the foundation of a Museum of Instruments that shall render a service to science similar to that which libraries render to literature.

A vote of thanks to the President for his valuable address was proposed, seconded, and carried by acclamation. The Society then adjourned.

FEBRUARY 7TH, 1866.

DR. BARNES, President, in the Chair.

Present—46 Fellows and 5 visitors.

The following gentlemen were elected Fellows of the Society:—Messrs. J. C. Burrows, Brighton; Robert Jones, Manchester; J. J. Phillips, Guy's Hospital; Samuel Tilley, Rotherhithe.

The PRESIDENT announced that several important responses had been received in answer to the invitation to aid the approaching Exhibition of Instruments. Dr. Radford, of Manchester, had forwarded a very large and valuable collection. Prof. Hugenberger, of St. Petersburg, has promised contributions from St. Petersburg and Moscow; Prof. Nirop, from Denmark; Prof. Lazzati, from Italy; and Dr. E. A. Meissner, Secretary of the Obstetrical Society of Leipzig, has offered the cordial aid of that Society.

AMPUTATION OF THE CERVIX UTERI.

Dr. MEADOWS related two cases, and exhibited two specimens, of amputation of the cervix uteri. In both the operation was performed for *allongement* of the uterus, with more or less procidentia. In one case the patient was twenty-three years of age, single, and had suffered from procidentia three years. Treatment of various kinds, by

pessaries and otherwise, had been tried without any benefit. The uterus measured four inches and three quarters in length, the length of the cervical cavity being fully two inches and a half. The *allongement* was limited to the infra-vaginal portion of the cervix. There was no rectocele or cystocele. About an inch and a half was removed by means of the écraseur, the patient making an excellent recovery.

In the second case the patient was twenty-eight years of age, married, and had had two children and two abortions. She first suffered from procidentia after the birth of the second child, and for several years part of the uterus has been outside the vulva. On examination, the uterus was found to measure no less than five inches and a half, besides being also much thickened and indurated. There was neither rectocele nor cystocele. About two inches of the cervix was amputated with the écraseur, but so difficult was it to cut through the thick indurated cervix that no less than two wire ropes and three chains were broken before the operation was accomplished. The uterine wall at the seat of amputation measured fully an inch in thickness. The patient has since made an excellent recovery, and in both these cases the uterus has continued so high up since the operation that there is every reason to hope a cure will be effected.

SUDDEN DEATH DURING LABOUR.

Dr. Barnes related two cases of sudden death during labour. In one case, that of a primipara, maniacal excitement came on during the dilatation of the cervix. Chloroform was given to induce moderate anæsthesia, so as to facilitate the application of the forceps. Gentle traction, aided by uterine contraction, effected delivery in half an hour. The placenta was cast. The patient maintained a good pulse; she spoke deliriously at times, but also rationally

afterwards. Death occurred, almost suddenly, ten hours after delivery. No post-mortem examination was held. He (Dr. Barnes) did not think death was owing to the chloroform, but was disposed to attribute it to the nervous shock which was manifested before the chloroform was given. The other case was more clear. The woman was in her seventh labour. Convulsion, stertor, and syncope set in before the expulsion of the child. The child was expelled alive. The mother died in twenty minutes afterwards. A small clot, quite recent, was found in the left thalamus opticus; and another, larger and of a dissecting character, in the left crus cerebri. The abdominal and pectoral organs were healthy. The record of such cases Dr. Barnes considered to be exceedingly important, as supplying illustrations of the fact that death during labour might occur independently of any fault on the part of the practitioner.

ON THE INFLUENCE OF LEAD-POISONING IN PRODUCING ABORTION AND MENORRHAGIA, WITH CASES.

By Benson Baker, M.R.C.S.,

DISTRICT MEDICAL OFFICER OF CHRIST CHURCH, MARYLEBONE.

(Communicated by Dr. Graily Hewitt.)

The subject of lead-poisoning producing abortion and menorrhagia has received but little attention in this country. I am indebted to Dr. Graily Hewitt for having my attention directed to it. In his recent work on the diseases of women, he says: "Menorrhagia may be present in cases of *lead-poisoning*. It was first pointed out by Paul, in the 'Archives Générales de Médecine,' that abortions are very frequently observed in women subjected to the influence of lead, and also in the same class of cases menorrhagia is very

common. I have observed cases, the facts relating to which are quite confirmative of Paul's statements. The subject of the influence of lead-poisoning in thus inducing menorrhagia is both novel and important." The above is all the information that I have been able to collect on the subject from the medical literature of this country. I have therefore consulted M. Paul's paper, and from it have gathered some important facts, which are more or less substantiated by cases that have come under my own observation. Abortion and menorrhagia are subjects of interest and importance, and anything that leads to determine the cause that is operating in producing these results is worthy of our attention. They may result from constitutional causes centering in the functions of the uterus, or from materies morbi, acting upon the uterus as a centre, radiating through the system. In the case of the pregnant uterus we have an example of constitutional symptoms radiating from and produced by an agent acting directly upon and through the uterus. In cases where the fœtus is tainted with syphilis, we have the two kinds of action—the pregnant uterus producing the usual constitutional symptoms, and the syphilitic poison acting through the medium of the constitution, and blighting the fœtus in utero. Observation has sufficiently demonstrated that the fœtus in utero is liable to the same diseases as the child. Some of these diseases are propagated through the mother's blood (as syphilis). We know that in cases of syphilis the mother tolerates the poison; but when it is conveyed to the fœtus it also resists it for a short time, but, its power of resistance being measured by its vital force, it is destroyed by the virulence of the poison long before it reaches maturity.

I do not wish to refer to those facts which are generally known with respect to lead-poisoning, but to confine myself to those facts and phenomena which seem clearly to indicate the hereditary transmissibility of lead-poison. I conceive that in women tainted with syphilis the death of the fœtus may be regarded as a symptom of hereditary syphilis, dependent upon either the mother or father, or both; so,

also, in cases where women are suffering from lead-poison, they frequently become pregnant, and as frequently miscarry; if these abortions are more frequent than the average number arising from other causes, and these other causes cannot be traced to have any connection with these abortions, then it may fairly be considered they are dependent upon lead-poisoning.

Children are frequently born of syphilitic parents, and in their early life give evidence of hereditary taint. So likewise, if parents who suffer from lead-poisoning have children, we may naturally expect that in their early years they will suffer from certain diseases analogous to, or participating in, the general cachexia of lead-poisoning; and if they did, it would not be unreasonable to consider these children as suffering from hereditary lead-poison. To demonstrate this hypothesis of hereditary lead-poisoning would require years of arduous labour and research. From M. Paul's paper it appears that lead-poisoning amongst women, and even amongst men, causes the death of the fœtus in utero. He says:—"The first time my attention was drawn to the subject was in the month of February, 1859, when a woman that worked at cleaning printers' types applied at the Hospital Necker, suffering from menorrhagia. Coupled with this menorrhagia she also had the ordinary symptoms of chronic lead-poisoning. I learnt from her that, previous to her present employment, she had been delivered of three healthy children at full term, still alive; but that since her employment as a type-polisher she had suffered much from ill health. Three months after taking to this employment she became tainted with lead-poison, and suffered from painters' colic. Four years later she had a second attack of colic, and suffered intense pain; shortly after she became pregnant, and was delivered of a dead child. Three years elapsed, and she had a miscarriage at the fifth month of her pregnancy. Besides these two cases of pregnancy, she had become eight other times pregnant, and each time, after a short suppression of the menses, and the delay of two or three months, she miscarried, characterised by an abundant

menorrhagia, and accompanied with colicky pains at the time." This patient also informed M. Paul that all the other females employed in the establishment suffered more or less from menorrhagia. Struck by this remarkable coincidence, M. Paul has collected the histories of eighty-one cases; and he has come to this conclusion, that not only has the absorption of the lead-poison by the mother an influence on the offspring, but also, if the father be tainted with lead-poison, we may expect to find it influencing the fœtus in utero, or the child when born. He gives a few cases of abortion and menorrhagia occurring where the women had nothing to do with lead in any form whatever. He affirms that the effects of lead are not only manifested by the symptoms generally recognised, but also—(1) by the occurrence of severe hæmorrhage, which he considers as abortions in many cases, but which it is difficult to prove, although the signs of pregnancy have existed for some time. (2) By recognised abortions, occurring between the third and sixth month of pregnancy. (3) By premature delivery. (4) By the death of the children within the first three years of their life.

M. Paul gives in detail the history of four women who were married after having become tainted with lead-poison. These he calls the first series of cases, and from an analysis of them we obtain the following results :—

These four women had together 15 pregnancies, distributed as follows, viz. :—10 abortions, occurring between third and sixth month; 2 premature births, the children dying soon after birth; 1 child stillborn; 1 delivery occurring at the full period, but the child died the same day. Out of these 15 cases, only one child was born alive that did not show any symptoms of a lead diathesis. Then, in order to prove that these cases were not merely remarkable coincidences, he gives the history of five women who had given birth to nine children before they were subject to the influence of lead-poisoning; the children were healthy and alive, neither did the mothers suffer from any menstrual irregularity; but after going into the type-cleaning works they had together

36 pregnancies, distributed as follows:—26 abortions, from the second to the sixth months of pregnancy; 1 premature birth, the child dying soon after; 2 children stillborn; 7 at full term, of whom 4 died in their first year, 1 in his second, and only 2 still alive, 1 of whom is very delicate and anæmic. This he calls his second series of cases.

What he gives under the head of the third series is only a single case, viz., that of a woman who, after having five abortions, left the type-polishing work, and having recovered from the effects of lead-poisoning, gave birth to a healthy child, still living.

Under the fourth series he relates the case of a woman who left the works for a time, and then went back. It appears that during the time she was under the influence of lead-poisoning she frequently aborted, but during the interval she was absent from the works she gave birth to a healthy child.

The father, says M. Paul, has a much greater influence upon the offspring than is generally supposed. In support of this hypothesis he mentions the cases of 7 women who had nothing to do with lead whatever, but whose husbands were subjected to its influence. These 7 women had together 32 pregnancies, resulting as follows:—11 abortions, 1 stillborn child, 8 full-term children which died in their first year, 4 that died in their second year, 5 that died in their third year, and 2 only that are now alive, one of them only being twenty-one months old. These statistics would tend to prove that nearly as great a mortality exists among the offspring when the fathers are affected with lead-poison as when the mothers are thus contaminated.

M. Paul makes a few remarks on the cases of some women who gave but slight evidence of lead-poisoning. Out of 29 pregnancies thus observed he has collected the following results, viz.:—8 abortions, 1 premature birth, 12 at full term which died in the first year of their life, 8 children still living.

Having obtained the above statistics, M. Paul compares them with the actual rate of mortality under ordinary cir-

cumstances of children during the first three years of their life, with the following result:—He finds that he ought to have a mortality of 7·42 in the first year; instead of that he has a mortality of 20; that in place of a mortality of 2·70 in the second year he has 8; that he ought to have 1·53 in the third year, instead of 7; and this result is obtained without taking into consideration all the cases of menorrhagia, which he says are nothing but unrecognised abortions.

The above is a concise statement of the facts of M. Paul's interesting paper. I shall now proceed to relate the history of some cases that have come under my own personal observation.

Mrs. S—, æt. 34, of a dark and rather sallow complexion, and of delicate appearance; rather below the middle height. She was in poor circumstances, and consequently had to help to keep her family by washing. I was called in to see her September, 1864. About two years previously she had been an out-patient at St. Bartholomew's for some chest affection. She is the mother of four children. She had miscarried once previously, owing to a severe fright. After that she became pregnant, and was delivered at full term of her youngest child. Her husband was formerly a plasterer and gilder, but not getting employment in that line of business, he has for the last two years been engaged in the painting trade. During the two years he has suffered seven times from painters' colic. His wife has been in the habit of washing his clothes, and she complained that the smell made her sick, and since her husband has followed the painting trade she has never felt well. Before she became pregnant she observed that her menses were more profuse than they had previously been. On the 22nd September she was suddenly seized with labour pains, and she lost a great deal of blood. The next morning I saw her; her pulse was feeble, and she was blanched. Those who were in waiting had thrown away the contents of the utensil, and with the clots, I presume, the embryo. On making an examination per vaginam, I found the os uteri dilated about the size of a florin, and the secundines protruding through the os uteri.

The cervix uteri was contracting tightly, and retained the placenta. I introduced my fingers into the uterus, and removed it. I made every inquiry of the woman as to the cause of the miscarriage, but she could assign none; and I was at a loss to discover the cause until I examined the gums, when I found the pathognomonic sign of the presence of lead-poison. She had advanced to the third or fourth month of her pregnancy. In this case there was persistent menorrhagia for five weeks, and, as far as I could ascertain, there was not any cause for it except the lead-poison. I found that the local application of cold and astringents failed to check the menorrhagia, and it was not until I treated the woman for chronic lead-poisoning that I succeeded in restoring the uterus to its normal functions. I may mention that at first the hæmorrhage appeared to be increased by the iodide of potassium, but that afterwards it subsided. The lead-poison appears in this case to have been the only cause of abortion and the menorrhagia.

The next case of lead-poisoning producing abortion is as follows:—

In May last I was called to see Mrs. W—, a painter's wife, who was dying from flooding. I found the bed saturated with blood, and it had run on to the floor; the fœtus was hanging half way out of the os uteri, and a stream of blood pouring away. I removed the fœtus, and induced the uterus to contract. This was the fourth time she had miscarried. She had suffered from painters' colic five or six times, had only been married two years, and never was in health when her husband was at work amongst the paint. She could give no reason for the present miscarriage, nor for the previous ones. I examined the gums, and found a faint blue line. This woman was some time before she got round. I advised the husband to obtain some other employment. He has gone into the police; and I hear that his wife's health is decidedly improved, and she has now advanced to the fifth month of her pregnancy.

A third case possesses some interest, but the facts are not so clearly brought to bear upon the question of lead-poison-

ing, because the father suffered from hereditary syphilis. Consequently, it is impossible to say whether the abortion depended upon the lead or the syphilitic poison.

I have not met with any cases where the woman primarily took the lead-poison, and the father was healthy; nor have I had any cases where the mother was free from lead-poison, and the father contaminated by it. Consequently, from my own personal observations at the present time, I cannot say how far the lead-poison in the system of the father, *per se*, may affect the offspring. There is no doubt in my mind that, if the mother's system be permeated with lead-poison, and she becomes pregnant, that she will either abort or, if she go her full time, the child will be sickly, and most probably perish during the first years of its life. It would be interesting to collect the histories of children whose parents had suffered from lead-poisoning, in order to see if there were any special diseases, or special predisposition to disease, likely to arise therefrom. As to the pathology of lead-poisoning of the fœtus in utero, I can say nothing. It appears a rational hypothesis to suppose that the action of the lead upon the fœtus is such as to destroy its vitality, and that the abortion depends upon the death of the fœtus, and not upon any specific action of the lead-poison upon the muscular walls of the uterus. It is true that the structure of the muscular coats of the intestines are the same as the uterus, and that lead-poison, acting on the intestines, produces violent contraction, as in colic. May it not act in the same way upon the uterus, and this contraction expel the fœtus? It may be so; but I rather incline to believe that lead-poison in its action on the fœtus very closely resembles syphilis, causing the death of the fœtus and consequent expulsion.

NOTES ON THE ANÆSTHETIC PROPERTIES OF THE BICHLORIDE OF CARBON.

By Arthur Ernest Sansom, M.B.

In the early history of an agent of importance to us as practitioners of medicine, any observations, however imperfect they may be, have a certain value. I lay before you my experience; it is of necessity limited; but I hope that it will soon be sifted and strengthened.

Sir James Simpson, in a paper in the "Medical Times and Gazette" for December 16th, 1865, brought forward many facts of interest concerning this addition to our Materia Medica; but I believe that I was myself the first to bring it into notice as an anæsthetic, in my book on 'Chloroform.' In my classification of agents having the property of producing narcotism by inhalation, it stands No. 18 on the list. I then called it tetra-chloride of carbon. Its special action is thus mentioned: "It causes, first, muscular movement and excitation of circulation; secondly, arterial contraction and anæsthesia; thirdly, if continued, arrest of respiration; fourthly, arrest of circulation. Tendency to cause muscular rigidity."

Chlorocarbon—to use the term suggested by Sir James Simpson—may be considered as an analogue of chloroform, the hydrogen of the latter being replaced by chlorine. It is a colourless, transparent fluid, heavier than chloroform (its specific gravity is 1·56), and possessing an etherial odour. I consider this flavour to be more "fruity," and more pleasant than that of chloroform whilst its pungency is less—hence it can be breathed with greater comfort than chloroform. It boils at 170° Fahr., chloroform at 140° Fahr. It is therefore considerably less volatile than the last-mentioned anæsthetic.

Dr. John Harley and myself tried the effects of bichloride of carbon upon a frog, on July 4th, 1864. We examined by the microscope the state of the circulation in the web of

the foot throughout the experiment. A few drops of bichloride of carbon were allowed to fall upon a fold of bandage over the frog's nose. At first considerable struggling ensued; then the frog lay motionless and nearly anæsthetized for half an hour. The circulation went on rapidly all the while, but every fresh application of the bichloride caused a retardation. This retardation was found to be due to a contraction of the artery which occurred to the extent of one third of the vessel's diameter every time the anæsthetic fluid was re-dropped. At the same time the capillaries contracted so as to allow, in some cases, the corpuscles to pass only one by one at intervals. Although the frog remained in a state of torpor, reflex action was not completely abolished during the three quarters of an hour in which we administered the bichloride of carbon.

Experiment 2nd.—The following experiment was conducted by Dr. John Harley and Mr. John Wood, on July 7th, 1864.

The vapour of bichloride of carbon was administered to a young dog. Altogether four fluid drachms of the bichloride were consumed. The administration at first caused much muscular movement, and in some of the struggles the back was arched. The pulse before the experiment was 164; in seven minutes it was reduced to 142, in a quarter of an hour to 120; afterwards to 108. The animal was now completely anæsthetized and lay quite still. Soon the respiration and pulse both ceased; the pupils were broadly dilated and the limbs were flaccid.

At the post-mortem examination five minutes after death the following signs were observed. The heart was distended so as to assume a globular form; the venæ cavæ were also distended. The right ventricle continued feebly contracting, but the left was not irritable. The pectoral muscles were in a state of constant quivering. The lungs were perfectly collapsed, and pressure of their substance caused no crepitation.

Experiment 3rd.—To a healthy guinea-pig I gave bichloride of carbon vapour. The anæsthetic was poured upon a

piece of lint which had been wrung out in hot water. In three minutes there was much muscular excitation; the hind legs were retrojected sharply. At the fourth minute there were cries and repeated struggles. In six minutes paralysis of sensation and motion was complete; reflex action was abolished; short gasps occurred every ten seconds; there was involuntary dejection, then complete muscular relaxation and death.

At the post-mortem examination the lungs were found completely collapsed; the right side of the heart was extremely distended with blood. The organ thus assumed a globular figure. The left side was empty. The blood was of a normal colour.

Sir James Simpson, speaking of the effects of chlorocarbon upon animals, says, "Its primary effects are very analogous to those of chloroform, but it takes a longer time to produce the same degree of anæsthesia, and generally a longer time to recover from it. Some experiments with it upon mice and rabbits have shown this—two corresponding animals in these experiments being simultaneously exposed, under exactly similar circumstances, to the same doses of chloroform and chlorocarbon. But the depressing influence of chlorocarbon upon the heart is greater than that of chloroform; and consequently I believe it to be far more dangerous to employ as a general anæsthetic agent." *

Inhaling the vapour of chlorocarbon myself, I found that the first sensations produced were very agreeable; the taste and smell were pleasant, and among the early effects was a greatly increased warmth of the surface, with a not unpleasant tingling extending to the very tips of the fingers. The period of half-consciousness was not followed by headache or other disagreeable after symptoms.

On May 15th, 1865, I tried the effect of the anæsthesia in a case of midwifery. It was readily inhaled, and the cries of the patient, which had been distressing before, became soon subdued, the pain was greatly subdued though not wholly abolished, and consciousness was retained.

* 'Med. Times and Gazette,' Dec. 16th, 1865.

I tried it again in a similar case on August 23rd, 1865. It was then long before any effect was manifested; the pain was imperfectly soothed, and I found that I had a great difficulty in administering a sufficient dose of the vapour.

The only surgical case in which I endeavoured to use the anæsthetic was for an operation of excision of the clitoris. So much muscular excitement was induced, the patient starting up wildly in the bed, that it was impossible to proceed, and chloroform had to be substituted.

Sir James Simpson records a case of midwifery in which chlorocarbon was administered by Dr. Black. The usual anæsthetic effects were produced, but the pulse latterly became very weak. In another case the patient did not distinguish it from chloroform which she had inhaled on a former occasion. In three cases of obstetric operation it answered quite well as an anæsthetic. In a case in which it was administered to an infant for the application of potassa fusa to a nævus upon the chest, the child, whose pulse was rapid and weak during the anæsthetic sleep, did not waken up for more than an hour and a half after the completion of the operation.

It is too early yet to speak of *conclusions* in respect of bichloride of carbon; but I may be pardoned for giving my impressions.

1. Chlorocarbon has the advantage of being more pleasant, less pungent, and more comfortably inhaled than chloroform. I think it will be more readily taken by nervous patients. At present it is difficult to procure; but very soon, by a process instituted by Mr. Ransford, it will be attainable in any quantity, and, I believe, at a much less cost than chloroform. It has also this great advantage, that it is not susceptible of decomposition by air and light. The liberated chlorine in the decomposition of chloroform has no doubt been a cause of fatal disasters.

2. Chlorocarbon is considerably less volatile than chloroform. I consider that the best way of administering it is to pour it upon a piece of lint or sponge wrung out in warm

water. Setting aside its volatility, I think its action is more analogous to that of ether than to that of chloroform.

3. Chlorocarbon seems to be, at first, a powerful stimulant to the circulation. When Sir James Simpson says that its depressing influence upon the heart is greater than that of chloroform, he must allude to the deeper stages of narcotism; for I have found considerable excitation of circulation and of muscular action, not only among the early effects, but even in the stage of induced anæsthesia. And in frogs, whose circulation has been brought nearly to a stand-still by chloroform, I have seen the administration of the vapour of bichloride of carbon reinduce a strong current.

4. I consider that chlorocarbon will be especially valuable, alone or combined with chloroform, in midwifery practice. Without attempting to induce abolition of consciousness, we can by its means diminish or annul sensibility, and at the same time maintain an increased muscular power.

5. But I do not consider it advisable to induce deep narcotism by means of this agent; and I think its use in surgical operations will be restricted. It is eliminated from the system much more slowly than chloroform. Inasmuch as its volatility is considerably less (the boiling-point of the one being nearly thirty degrees higher than that of the other), and its vapour-density about one fifth more, it is easy to see that the system will take a longer time to disembarrass itself from it. And as the stage of deep narcotism is associated with considerable enfeeblement of circulation, it is unnecessary to point out that danger may occur.

Dr. Greenhalgh stated that two and a half months ago he requested Dr. Sansom to administer chloroform to a lady during the removal of a large polypus from the uterus. She was extremely anæmic and feeble, from large and frequent losses of blood occurring over a period of two years and a half. She had a damaged heart, and a profuse sanious and offensive discharge from the vagina. Shortly after the administration of the chloroform, and before complete anæsthesia was induced, her pulse began to falter, her breathing became embarrassed, and her countenance livid. Dr. Sansom, without delaying the inhalation,

substituted ether with the best results. Dr. Greenhalgh begged to ask that gentleman if he had adopted that similar practice in other cases with good effects; and if so, whether he considered that the vapour of ether could be regarded as an antidote to the evil consequences of chloroform, and whether he could offer any physiological explanation of how such beneficial effects are brought about.

Dr. Sansom replied that it was his constant practice to administer ether if in any case chloroform seemed to produce a depressing effect. Indeed usually, in prolonged operations, he thus maintained the anæsthesia. The substitution, or rather addition, was never attended by any return of sensation. He always found that the plan answered admirably: it certainly restored the force of the circulation. It was perhaps premature to explain the *rationale* of the procedure; but he would remark on the singular circumstance that whereas chloroform tended to empty the blood-corpuscles, ether tended to distend them—chloroform reddened the blood, and ether darkened it. There thus existed, as it were, a natural antagonism amongst agents of the anæsthetic class. Again, they influenced differently the sympathetic system. Ether would cause contraction of the heart and arteries even during the period of the influence of chloroform, and the bichloride of carbon did the same in a marked degree.

SOME REMARKS ON ENLARGEMENTS OF THE UTERUS WHICH FOLLOW ABORTIONS, PREMATURE OR NATURAL CONFINEMENTS; WITH CASES.

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Pathological anatomists have long since recognised the fact, that the uterus may remain much increased in size after a previous parturition or abortion. The celebrated Dr. M. Baillie refers to it, and Dr. Robert Hooper, in his 'Morbid Anatomy of the Human Uterus,' 1832, remarks: "When a fœtus has been recently expelled, it is, in some instances, a long time before the uterus returns to its original

state, and it is larger and softer during that period. I have examined uteri four times their natural size from this cause, two months, and even more, after the fœtus was expelled" (p. 5). Latterly the subject has been treated of by various authors under the name of sub-involution of the uterus. Professor Simpson published three cases of this affection in 1852, in one of which the uterus appeared as a large tumour stretching upward from the pelvis; and in 1861 he published some further observations on the same subject.*

Some years ago (in 1851) I placed before the members of the London Medical Society one of these enlargements of the uterus. I described the preparation without applying any designation to the enlargement; but the report of the meeting in the medical journals was headed "A New Disease." This was added without my knowledge. In the latter part of the same year I drew attention to those affections in a short paper, which was read before the same society. The uterus was taken from the body of a woman who died from typhus fever. The body and neck of the organ were much enlarged, rounded, and plumb-like to the eye; the colour deeper than natural; firm and elastic to the feeling, but devoid of any hardness. The orifice was round, open, admitting the end of the finger into the cervical cavity. It contained no white-of-egg mucus; the lips round, projecting into the vagina like a piece of thick cord formed into a circle, smooth, and of a uniform flesh-colour. Small depressions existed on the inner surface of the lips, having a slight cribriform aspect, and which might, on superficial examination, be taken for loss of substance; but they were readily recognised as the lower terminations of the depression existing between the rugæ (arbor vitæ) in the cervical cavity. The veins in the lateral ligaments were large, and contained much blood. Dividing the substance of the organ showed the orifices of many vessels (arteries) containing blood—these being more numerous on the inner portion near to the mucous membrane. The walls of the body measured seven sixteenths of an inch in thickness; those of

* "Clinical Lectures," 'Medical Times and Gazette.'

the neck rather more than one fourth of an inch. The cavity of the body was much enlarged; that of the neck also large; the rugæ strongly marked; and the constriction between the body and the neck admitted an instrument half an inch in circumference. The mucous membrane of both cavities was more distinct than natural; that lining the neck could be raised by a fine pair of forceps, and, by the aid of a lens, dissected from the enlarged rugæ beneath, their enlargement consisting of an increase in size of the tissue of the uterus entering into their formation. The uterine tissue did not appear to the eye in any way altered from that of health, and, with the microscope, no inflammatory or abnormal deposit could be detected. The muscular tissue, however, throughout the whole organ, was enlarged, more developed than in the unimpregnated uterus, and appeared to hold a medium position between that and the muscular tissue of the gravid organ.

This enlargement of the uterus is frequently met with, and although recognised, has not, it appears to me, received the attention which its importance in practice entitles it to. It varies very much in degree—from being a little larger than the natural organ, to a size resembling a large tumour stretching upwards from the pelvis. As might, *à priori*, be supposed, it does not appear of itself to give rise to any marked morbid symptoms. It may exist for years with comparatively little inconvenience to the patient; but it may be, and very frequently is, the apparent primary cause of severe and sometimes fatal hæmorrhage. From the state of the blood-vessels this enlarged uterus is also liable, on the recurrence of the catamænia, to become congested; and the congestion readily passes on to a kind of congestive inflammation, which may involve either the whole or any portion of the organ. It also appears to take on other changes, by which it becomes firm and hardened, in which state it has frequently received the name of fibroid deposit, and is the seat of further alterations which have been more especially noted about the neck and lips. The increased size also renders it liable to various deviations from the natural

position, and to become either retroverted or antiverted, retroflexed or antiflexed, or prolapsed to a varying extent. And whilst the uterus is liable to these morbid changes consequent on previous impregnation, the vagina is also liable to similar changes, from apparently the same causes. It may remain, after parturition or abortion, enlarged, and its walls thickened, with supervening congestion and inflammation, after the same manner as with the uterus. And this condition of the vagina may exist alone, or in combination with the enlargement of the uterus itself, each giving rise to its proper diagnostic symptoms.

Such are some of the aspects under which this primary enlarged uterus presents itself in practice; and it is almost needless to add, that these pathological states give rise to various morbid symptoms which are important to recognise. I should have preferred to illustrate each of these by the detail of appropriate cases; but after drawing them up I found they extended much beyond the limits allowed for papers in this Society, and have, therefore, been obliged to curtail them in the present remarks.

I need not dwell upon the fact that enlargement of the uterus following previous impregnation may exist even for years without giving rise to any special morbid symptoms. Of far more importance are the severe hæmorrhages which very commonly attend this enlarged state. We are all familiar with the fact that hæmorrhage not unfrequently occurs at periods varying from a few days to even six months after an abortion, a premature confinement, or a delivery at the full period—more frequently, however, after the former than the latter. These hæmorrhages usually cease during the employment of rest in the recumbent position—astringent medicines—the application of cold—a light, nourishing diet; to be frequently followed by leucorrhœal discharges, profuse menstruation, pains in the stomach and back, and general weakness. In all of these cases that I have seen, the uterus has been considerably larger than it ought to have been, if the absorption of the gravid organ had gone on in the usual and healthy manner. These hæmor-

rhages usually cease under the treatment mentioned; yet cases every now and then occur wherein the hæmorrhage continues, the woman becomes gradually exhausted, and finally sinks. Some years ago I met with more than one of these instances, which produced a strong impression upon my mind.

Case 1.—In the summer of 1851 I attended a lady, æt. 35 years, in a premature confinement at about the sixth month. She was delicate, and had latent tubercles in the upper lobes of both lungs. Convalescence appeared to progress favorably for about one month, when she was suddenly seized, without apparent cause, with profuse hæmorrhage. The usual astringent remedies were given without effect. Cold vaginal injections were employed, and the vagina plugged, without avail. I suggested injecting the cavity of the uterus with astringent lotions, and had the benefit of Dr. Murphy's opinion; but my suggestion was overruled on account of the supposed danger in employing them. The hæmorrhage continued, a slight attack of bronchitis supervened, and she gradually sank from exhaustion. The uterus was large, pyriform, elastic; the orifice open so as readily to admit the end of the fore-finger into the cavity of the neck; no heat or pulsation of the arteries was present, but the length of the organ was not measured by the introduction of the sound.

A short time after, I met with a somewhat similar case in consultation.

Case 2.—A lady, between thirty and forty, the mother of several children, was confined, somewhat prematurely, of a stillborn child. The convalescence proceeded favorably until about the end of the fourth week, when she was seized with severe flooding. The usual remedies were tried without benefit. The uterus was large, pyriform, as in the preceding case; the orifice open, readily admitting the first finger, when a soft, flat substance could be felt attached to the anterior surface of the uterine cavity. It was supposed to

be a portion of adherent placenta, and to be the cause of the hæmorrhage. I urged the necessity of injecting the uterus with astringents, but was again overruled by reason of the supposed danger. The hæmorrhage continued, and the lady gradually sank. At the examination of the body, the uterus was large, elastic, pyriform; the cavity contained some blood; the mucous membrane red; and adhering to the anterior surface was a small, flat coagulum, scarcely the size of a half-crown piece.

Within a few months I met with another case of hæmorrhage, which, however, arose from a fibrous tumour occupying the anterior part of the body of the uterus.

Case 3.—A married lady, residing at Haverstock Hill, about forty years of age, who had never been pregnant, suffered for several months from irregular and lengthened discharges of blood, though to no great amount. She had been treated by a medical gentleman in the neighbourhood with partial and temporary success. A severe attack of hæmorrhage then occurred, and I saw her in consultation with the medical gentleman. On examination, a fibrous tumour was found occupying the anterior wall of the uterus; and, considering the little result which had followed the previous treatment, I advised the injection of the uterine cavity with an astringent lotion. This was objected to as being hazardous and dangerous, and it was decided to have the opinion of another physician. On the following day Sir Charles Locock met us, and, having given his approval of the plan of treatment, the cavity of the uterus was injected with a solution of alum and tannin. No inconvenience followed, except some pain at the time; the injection was twice repeated, and all discharge ceased. The lady quickly regained her health, and continued well for about two years, when the hæmorrhage returned, somewhat suddenly, in considerable amount. The uterus was again injected twice or thrice with a similar solution; the hæmorrhage ceased, and has not again returned up to the present period. The general health of the lady has since been very good, although

the tumour can be felt occupying the hypogastric region, and much resembling the size of a well-contracted uterus a short time after childbirth at the full period.

In somewhat singular succession I was called to the following case:—

Case 4.—I received a sudden and urgent request to visit a lady, residing in the outskirts of Regent's Park, who was said to be suffering from violent flooding. I took with me the means for injecting the uterine cavity, and on arriving at the house found the medical gentleman in attendance in great dismay. The bed was saturated with blood; the windows and door of the room open; the lady lying on her back; the face blanched; the lips perfectly pale; the hair thrown back; the face and surface of the body covered with a cold, clammy perspiration; the pulse scarcely perceptible at the wrist. I learned that she had miscarried at about the third month, a few weeks previously, and that this violent flooding had come on suddenly and was still continuing. I proposed to inject the uterus at once with an astringent, which was assented to; and, as quickly as we could, the catheter was passed into the cavity of the organ, and some alum and tannin solution thrown in. The flow of blood diminished, the pallor of the face increased, the head fell back, the eyes closed, the pulse ceased to be perceptible at the wrist, and the breathing was only continued by gasping respiration. The injection of the uterus was slowly and cautiously continued; the hæmorrhage ceased, the breathing became more natural, she somewhat revived; a little stimulant was administered, the vagina carefully plugged with cloths steeped in the astringent solution, warmth applied to the extremities, and the bed made as comfortable as possible without moving the patient. Liquid nourishment, combined with some stimulants, was cautiously given at short intervals; no return of the hæmorrhage took place; the plugging was removed on the third day; and, as a question of security, the uterus was twice subsequently injected. The uterus was large, pyriform, elastic; the

orifice round, open, and admitting the index-finger into the cervical cavity. No untoward symptom occurred, and the lady made a perfect and somewhat rapid recovery.

CASE 5.—Oct. 18th, 1858, I was requested to visit Mrs. J—, æt. 39. She had six children; had suffered from two miscarriages; the last confinement two years previous, from which she recovered perfectly; was quite well until about one month ago, when she again miscarried at the third month. The third day afterwards one of the children fell down stairs: she ran to its assistance, and remained up that day; also sat up the two following days, and on the evening of the second day was suddenly seized with severe flooding about eleven p.m. She sent for her medical attendant about two a.m., who found her "drenched up to the shoulders in hæmorrhage." The orifice of the uterus was open to admit two fingers; the coagula were removed from the vagina and the neck of the uterus, and the ergot of rye administered every four hours; no pain following, nor was there any perceptible contraction of the organ induced. The hæmorrhage ceased for three days, and then returned with the "same gushes as previously," and a pear-shaped coagulum was expelled. Compound infusion of roses with sulphuric acid were administered; the hæmorrhage partially ceased, but returned every now and then with the same gushes, and the expulsion of coagula the size of two fingers.

She was of fair complexion, sandy-coloured hair, medium stature; looked rather anxious; had lost a considerable amount of blood and much flesh; no thirst; tongue natural; bowels rather confined; considerable amount of flatulency; abdomen resonant on percussion; no pain except upon pressure, and then at the sides of the abdomen, the iliac regions, and deep in the hypogastrium; the pulse 104, small, feeble, regular; no particular headache; slept well.

The vagina was lax, ample, no particular tenderness; the uterus in the natural position; the orifice large, admitting more than two fingers; the lips large, full, round; no

increased tenderness; no pulsation of the arteries; the body of the uterus felt nearly as high as the umbilicus. A finger passed into the neck of the uterus felt a substance, apparently a coagulum, in the uterine cavity, but which could not be reached so as to remove it; whilst the attempt, combined with pressure on the abdomen, caused considerable pain. An elastic catheter was then passed into the cavity of the uterus, which was washed out, first with cold water, and afterwards with a solution of alum and tannin in cold water: a substance escaped from the uterus which appeared to be a loose fibrinated coagulum.

A mixture with dilute sulphuric acid, sulphate of magnesia, and tinct. of opium, was directed to be given every four or six hours.

19th.—Was very faint last evening; now better; slept well; appetite good; pulse quiet; lips dry; bowels not moved; some pain in the lumbar and iliac regions, also deep in the hypogastrium; no discharge since the first injection of the uterus; no coagula have passed. The vagina somewhat contracted, and rather tender under examination; some granular coagula on the surface, of a pale port-wine colour. The uterus appeared smaller, the orifice notably contracted; the lips moistened by a thin fluid from the cavity of the organ, which was apparently empty. The mixture was continued, and the uterus again injected with the solution of alum and tannin.

The same treatment was continued for a few days; the hæmorrhage did not return, and she considered herself well.

The occurrence of hæmorrhage, the formation of coagula in the cavity of the uterus, the inefficiency of the usual remedies, and the good effects of the injection of astringents, appear to be fairly shown in this case.

Case 6.—Margaret L—, æt. 30, applied for advice on 10th October, 1856, in consequence of repeated and severe floodings. She was married at the age of twenty; had eight children, and been twice confined of twins; her last confine-

ment was with twins eighteen months ago, previous to which she had lost two children; had a troublesome cough, and suffered from pain in the right iliac region, with swelling of the veins of the right leg and thigh. The confinement was quick; "lost a great deal of blood;" the lochia was about the same as with the other children, "always having a great deal;" she got up on the ninth day, and for four weeks afterwards had a red discharge "as if being poorly;" had no particular pain, only weak. She suckled both children about fifteen months; her health was pretty good, only weakly; always had an aching pain in the lumbar region, and the "whites" more than after any of her previous confinements. She was not able to live so well as she used to do, and eleven months ago was "awfully poorly" for eight or ten days, when she kept her bed and took some medicine; had no further discharge until one month after weaning the children in August, when "was poorly as usual" for one week; was well about nine days, when the discharge again came on, and has continued ever since, for seven or eight weeks, accompanied with no particular pain, only aching in the back; no bearing down; abdomen felt full; could not walk about as well as usual; the discharge very great; never any clots; once or twice it ceased for a short time, and then recurred suddenly and in profuse quantity; the colour almost black; had not taken any medicine. She looked well; was in no pain, only felt very weak and feeble; appetite very good; bowels regular; tongue clean; pulse eighty, soft, regular; slept very well. Five grains each of gallic acid and ergot of rye were prescribed three times a day, with rest.

October 17th.—Has continued the medicine; the discharge much the same; considerable fluid discharge in the vagina, which appears healthy in every respect. The orifice of the uterus admits the point of the finger; the lips round and small; the neck about the size which may be said to be usual; some small clots felt at the orifice; on passing the finger anteriorly, a round globular elastic tumour perceived continuous with the neck; the sound met

with some obstruction until directed well forwards, when it passed nearly four inches, yet produced no pain. With the speculum the vagina appeared natural; the orifice of the uterus was round, directed towards the hollow of the sacrum, and contained some glary mucus with small coagula. A small elastic tube was passed into the cavity of the uterus, which was washed out with cold water, and afterwards injected with a solution of alum and tannin: this produced no pain at the time, but afterwards "a feeling as if about to become poorly."

18th.—The discharge rather increased to-day; slept pretty well. The uterus again injected with solution of alum and tannin; gave "no pain, at least only a little;" the uterus felt large—like an elastic ball distended with its contents; the clothes indicated a great discharge of blood.

19th.—Is much better in every respect; not half so languid; discharge very little; one small clot passed in the course of the day; considerable red discharge in the vagina, very little on the clothes. The uterus again injected; no pain, but "a feeling in the stomach as after getting up from childbed."

20th.—Says, "is nicely;" in no pain; discharge more watery, though still red; very little on the clothes. Uterus again injected, and one or two fibrinous clots escaped with the lotion.

21st.—Very little red discharge, more yellow and thick, with a strong peculiar odour; no coloured discharge in vagina; orifice of uterus so contracted as to render the introduction of the usual elastic tube difficult. Uterus again injected.

23rd.—No discharge; no pain; complains of fulness of abdomen, which attributes to wind; bowels regular; appetite good; uterus notably smaller, and again injected with solution of alum and tannin; a gentle aperient and carminative mixture ordered.

25th.—For two and a half hours after the last injection was in more pain than usual; swelling of stomach more felt after the injection; to-day felt quite well, and not so large;

says no discharge of any kind. A good deal of stringy mucous discharge at the upper part of the vagina; some transparent tenacious mucus in the orifice of the uterus, the edges of which are red, and bleed when touched with the speculum; the redness extending into the uterus; some tenderness of the body on pressure.

November 18th.—Has been quite well until three days ago, when after some walking the hæmorrhage returned, and is now "very bad;" thinks it is caused more by worry than by the walking. The uterus was injected as previously.

December 22nd.—The discharge soon ceased after the injection; complains of pain about the stomach; increased size, and feeling so full; hand swells; looks very well. The orifice of the uterus much contracted, directed downwards and backwards; the body of the uterus higher up, and could not be felt from the vagina. She was ordered a rhubarb, soda, and ammonia mixture twice a day, and after a short time reported herself as being "quite well."

In this case a woman, after an unusual confinement, at which she lost a considerable amount of blood, had the lochia in greater quantity and for a longer period than usual. When the red discharge ceased, it was succeeded by more or less "whites." She felt weak; had no particular pain, yet was troubled with an aching pain in the lumbar region. Five or six months afterwards she was "awfully poorly," which continued for eight or ten days; at the end of another month she had another discharge of blood for a week, but to a less degree, and which she described as being "poorly as usual." After it had ceased for about nine days it returned in "very great" amount, and continued more or less for seven or eight months. Once or twice during this period it ceased for a short time, and again recurred suddenly in profuse quantity. The general health continued pretty good, but medicines appeared to have little or no influence in arresting the hæmorrhage. The uterus remained enlarged to a greater degree than is natural, yet there was nothing to indicate that any active action was going on. A change, however, was gradually taking place in the position

of the organ. The uterus was antiverted, and, gradually bending upon itself at the union of the cervix with the body, was becoming antiflexed. Astringent injections were now employed, which produced little inconvenience. The discharge of blood was rather increased the following day, but considerably diminished in the next twenty-four hours, and on the fifth day had entirely ceased. A vaginal discharge appeared for a short time, probably produced by the irritation of the injection, of a yellow and thick character, having a strong, peculiar odour. It is also probable that the pain spoken of as continuing two and a half hours after the last injection was occasioned by this vaginal irritation. She then continued quite well for one month, when a return of the hæmorrhage took place, which was quickly arrested by the astringent injection. Some slight derangement of the digestive system was removed by a carminative aperient, and she considered herself well.

Many of these cases afford a means of showing by experiment, so to speak, that the leucorrhœal discharge proceeded from the vagina, and not from the enlarged uterine cavity. In injecting the uterus with astringents, I usually pass a Ferguson's speculum up to the lips of the uterus, and allow the astringent injection to flow through it on returning. With this precaution no vaginal pain follows the employment of the injection, and no leucorrhœal discharge is produced. But when, from any cause, this precaution had not been taken, and the injection was allowed to flow over the surface of the vagina, pain more or less severe was induced in the vagina, and deep in the hypogastrium, irritation and tenderness of the vagina followed, accompanied by more or less—sometimes considerable—leucorrhœal mucous discharge.

Case 7.—Mary A. R—, æt. 27, tall, strong, well-made woman, miscarried about one month ago, at the end of three months' pregnancy; is a laundress, and accustomed to standing from twelve to fifteen hours each day. Attributed the miscarriage to a fright, as she felt pain in the back and

stomach directly afterwards, which continued until the ovum was expelled. "Lost a very great deal of blood indeed;" two days afterwards applied to a medical man, in consequence of the continued discharge, which came away in clots larger than a duck's egg, and accompanied with great pain at the very bottom of the stomach. Took some red, sour medicine without benefit; remained in bed only one day afterwards. The discharge continued for nearly a fortnight, ceased for three days, and again returned as bad or worse than ever, attended with much pain, "more up the passage." Continued to go about a little, being obliged to attend to her work as laundress; and at the end of three weeks applied for advice, 26th August, 1853, suffering from considerable hæmorrhage. I had seen her several times previous to her marriage; she then suffered from prolapsus, the orifice of the uterus coming down to a level with the outlet of the vagina; but as she could continue her employment without inconvenience, she took little notice of it. The uterus now prolapsed, the orifice being slightly beyond the vaginal outlet; the hæmorrhage seen distinctly to flow from the uterine cavity; the orifice admitted the little finger with difficulty; the lips somewhat enlarged; the neck soft, a little enlarged; the body could not be felt; the sound passed to the extent of five inches into an apparently soft and considerable cavity. On tilting the end of the sound forwards the body of the uterus was felt large, uniform, pyriform, and somewhat elastic. The vagina thickened and coriaceous. She was pale, chlorotic-looking, evidently suffering from loss of blood; felt very giddy and weak; lightness at the top of head. The uterus was washed out with cold water, and injected with a solution of alum and tannin. No pain complained of. The ergot of rye, with borax, was prescribed, in half-drachm doses, three times a day.

29th.—"Was very bad in the stomach, about the navel, and at the bottom of the back," after the injection; not like afterpains. They continued all day, and the following morning the discharge was "a great deal better;" now nearly ceased, being light-coloured and watery; feels much

better; slight giddiness; slept much better. Pulse 84, regular; moderately full; tongue large, moist, slightly furred at base. Bowels relieved each day. The uterus projects about three quarters of an inch beyond the vaginal outlet; the orifice as before; the lips about the same,—the inner surface covered with a red swollen mucous membrane extending into the cervical cavity; no abrasion or destruction of surface, though the appearance presented a "beau-ideal" of miscalled ulceration; the sound passed five inches and admitted of being turned, as if in a considerable cavity; no hæmorrhage; some pain when the sound entered the uterine cavity. The uterus was again injected and the powders continued.

September 2nd.—The discharge entirely ceased; no perceptible diminution in the size of the uterus. Dilute sulphuric and chloric ether were prescribed.

5th.—"Feels a great deal stronger, and intends to commence work regularly to-morrow;" "no discharge whatever;" pulse 96, regular, small, readily compressed; appetite very bad; tongue pale, moist; slight pain at the top of head and over the forehead; a bearing-down pain at the bottom of the back, which has been for some time. The uterus and vagina as before; the lips have lost much of the red raw appearance; no discharge; sound passed four and a half inches and with some difficulty; body slightly anti-verted.

10th.—Reports herself as quite well, and able to continue her work; catamenia appeared twelve days ago; for the first day had great pain at the bottom of the back and lowest part of the stomach, afterwards no pain; quantity less than usual; continued for two or three days; only two or three coagula; now no discharge. The prolapsus as before; the sound passes four and a half inches, after being directed forwards; is painful when enters the uterine cavity; the colour of the internal mucous membrane as seen at the orifice paler than before, and now not much deeper than natural; the neck apparently enlongated.

July 18th, 1864.—Has been quite well since last report,

and continued her work; catamenia did not reappear for three months, when thought she might be pregnant; a week ago had considerable discharge in the night, with great pain in the sacral region and lower part of the stomach; no clots, but colour very deep; the discharge still continues, and becomes worse when attempts to do anything. The uterus was washed out with cold water and again injected with solution of alum and tannin, and a mixture with dilute sulphuric acid, tannin, and chloric ether prescribed.

The discharge ceased in a few days; she continued her employment; became pregnant; was confined at the full period; had a natural labour; and perfectly recovered her strength.

In this instance a strong and healthy young woman, æt. 27, miscarried at the end of three months, in her first pregnancy. She lost a considerable amount of blood at the time, and this discharge continuing applied for medical assistance after two days; the usual remedies were administered; she remained in bed one day; the discharge continued for nearly a fortnight; ceased for three days; then returned as bad, or worse, than ever; and she came under observation suffering from considerable hæmorrhage. The uterus being prolapsed afforded unusual opportunities for observing its conditions, and for noting that the hæmorrhage came from the uterine cavity. The uterus was injected with an astringent lotion, and although no pain was complained of at the time, yet afterwards there was great pain about the navel and at the bottom of the back. Three days after the first injection the hæmorrhage was much arrested, and on the seventh day it had entirely ceased. Six weeks subsequently she reported that the catamenia had appeared in the interval, continued two or three days, and passed off naturally.

Nine months afterwards she reported that she had been quite well, and enabled to continue her employment as a laundress. But the catamenia had not appeared for three months; she then had great pain in the lower part of the stomach and back, attended with considerable discharge of

blood. The discharge continued more or less for a month; the uterus was again injected, and in a few days all hæmorrhage ceased. She continued quite well, became pregnant, was confined at the full period, and perfectly recovered her strength afterwards. The uterus was prolapsed before her marriage; the orifice appearing at the vaginal outlet; and after her miscarriage it was still prolapsed in the same position. But at no time did she suffer any inconvenience from this position of the organ, and was enabled to continue the laborious employment of a laundress. This is in accordance with what I have observed with regard to alterations in position; for in those cases where symptoms or inconvenience have accompanied an alteration in the position, I have invariably found these symptoms to have been the result of concomitant disease, or in consequence of the uterus being pressed upon some particular part by the super-imposed viscera; but not from any alteration, *per se*, in the position of the uterus. The prolapsus, however, afforded a good opportunity for observing the condition of the organ. The mucous membrane lining the cavity of the neck was red and swollen, and, descending down upon the inner surface of the lips, presented the appearance which has been denominated ulceration. There was not, however, the least abrasion or destruction of surface to be detected, the latter of which being essential to constitute ulceration. And although, anatomically speaking, the mucous membrane of the vagina, and that lining the cavity of the neck, is strictly continuous, yet in the diseases of this part they are separated and defined by a well-defined line situated near the inner margin of the lips. Hence, when the mucous membrane lining the cervical canal is red and swollen, and that lining the vagina does not participate in the same manner, an appearance is presented at the orifice which has been so erroneously designated ulceration.

The following case may, I think, fairly be recorded as an instance where a coagulum forms in the uterine cavity, is expelled with much hæmorrhage, and often considered to be a miscarriage. I am aware that they have been described

as instances where the hæmorrhage consequent upon the separation of the ovum has obliterated all traces of that structure; but I think they are more correctly considered as coagula simply.

Case 8.—I was requested to visit E. D—, æt. 29, who had been suffering from great discharge of blood for nearly a fortnight. She was of medium stature and conformation, light hair, fair skin, blue eyes; had two children; considered she miscarried three months ago, since which period the catamenia had been more profuse than previously. The present discharge commenced at a menstrual period. Complained of a heavy, aching pain in the lumbar region; pain across the lower part of the stomach, and a little on the inside of the thighs—a feeling of great weakness; otherwise the health did not appear to be affected. On examination, the vagina was ample, without any heat or tenderness. The uterus considerably enlarged, not tender; the orifice open, admitting the end of the index finger; the lips slightly irregular, rather firm. There was considerable discharge of bright red fluid blood. Ten grains of ergot of rye, with five grains of gallic acid, were prescribed, every six hours. The existing pains became considerably increased in severity, and on the second day a coagulum, the size of an elongated walnut, was expelled, which was carefully preserved and shown as an evidence of an abortion. To a superficial examination it had much this appearance; but by frequently changing the water in which it was placed, much of the black colour disappeared, and it presented the pale appearance of a fibrinated coagulum. I afterwards carefully searched it for any appearance of an ovum, but could discover nothing but the fibrine of a coagulum entangling the blood-corpuscles. The hæmorrhage ceased the second day after the expulsion of the coagulum; all pain passed away; a feeling of weakness and depression; complexion pale. The tincture of the muriate of iron, with dilute hydrochloric acid, were prescribed. In three weeks she appeared to regain her health, and passed over the next catamenial period without inconvenience.

In the following case the enlargement appears to have existed for several years without producing any inconvenience to the individual.

Case 9.—Mrs. W—, æt. 32, married fifteen years; one child at seven months fourteen years ago; no miscarriage; always very delicate; was in labour twenty-four hours; did not lose more blood than usual; had a good convalescence; was as well as ever afterwards. About two years ago, when on a tour in Ireland, walked much during the catamenial period, which was always abundant, and had a great amount of discharge for more than a week. Nearly ever since this time the flow had been increased and profuse at each period, accompanied with clots the size of an egg, and continuing more or less during the intervals. Had used a great variety of vaginal injections, and taken a quantity of medicine, without benefit. Is very nervous; does not sleep well, always dreaming; pulse 100, very small, feeble; skin soft, delicate; suffers much from palpitation, even on ascending a few stairs; in no pain, only after standing or walking a short distance an aching at the bottom of the back. Appetite not good; tongue clean; bowels regular; water clear, natural. The vagina rather narrow at the entrance; no tenderness; no heat; upper portion dilated; relaxed; membrane pale, smooth; little or no discharge. The uterus antiverted; the orifice round, about as usual after childbearing; the lips round, natural; the neck a little enlarged; no tenderness; sound passed three and a half inches; produced a disagreeable sensation, but no decided pain.

June 25th, 1859.—The uterus was injected with a solution of alum and tannin through a speculum, having failed to introduce the catheter without, by reason of the position of the orifice. The muriated tincture of iron, dilute nitric acid, and chloric ether, three times a day, were prescribed.

July 2nd.—Had considerable pain after the injection for an hour, at the lower part of the stomach and upper sacral region. Catamenia appeared a few days ago, and have been "very great indeed;" a general feeling of debility; looks

pale; complains of lightness and giddiness in head. The uterus as before; considerable red discharge from the orifice; injected through the speculum as previously.

4th.—Severe pain for an hour after the injection, which then passed away; uterus again injected; the discharge considerably diminished.

9th.—The injection followed by the same pain as before; no red discharge noticed; much difficulty in introducing the catheter, which appears to meet with an obstruction at the upper part of the cervical canal, and then to enter an enlarged cavity. Uterus again injected, and less pain complained of. The medicine was continued, with the cold hip bath, using the syphon syringe each morning.

15th.—Suffered great agony after the last injection for five hours; it then passed off, and no inconvenience since; no red, but a little white discharge; much better in herself.

September 6th.—Returned from the sea-side; catamenia appeared one week after the time; continued five days; quite free for nine days, when perhaps from some imprudence in walking a flooding came on which has continued more or less since, now several days; no further inconvenience; general health improved. The uterus injected with equal parts of tincture of iodine and water; no pain complained of.

July 20th, 1860.—Is stouter and much better in every respect, but not quite well; the catamenia appeared a month ago, had a considerable quantity for a fortnight, was absent for a week, and now again has a free discharge. The vagina more contracted, less flabby to the feel. The uterus much antiverted, somewhat smaller, very tender when pressed by the finger; neck and orifice about natural; lips small. With the speculum, the mucous membrane pale, smooth; the lips and orifice a little red; sound passed three and a half inches, and induced considerable pain and a very curious feeling. The uterus washed out with cold water, and afterwards injected with tincture of iodine. . Tincture of Indian hemp with bichloride of mercury in small doses prescribed.

August 6th.—Was again suffering from hæmorrhage

following prolonged menstruation, which had continued for seven days. The body of the uterus somewhat smaller, but considerable pain complained of when the catheter was introduced. The uterus washed out with cold water and again injected with tincture of iodine.

In the autumn of the same year I met Mrs. W—, who appeared much improved in health. She said she had not suffered any inconvenience since I had last seen her.

The comparatively trifling circumstance of more exertion than usual appeared sufficient to determine, in a uterus previously enlarged for a period of twelve years, a considerable amount of hæmorrhage, accompanied with clots, at each catamenial period, and followed by a continuous discharge of blood. The various means employed failed to arrest this discharge, which was only finally effected by injecting the cavity of the uterus with very powerful injections. As impregnation readily occurs in these cases of enlargement, it was probably prevented in this instance by the antiverted position of the organ.

Case 10.—The following appears to be an example where, after a natural confinement, the uterus and vagina both remained enlarged, and became subsequently congested.

Mrs. J—, æt. 24, of strong and healthy constitution, was confined of her first child in August, 1864. The labour is said to have been natural; the pains, which were left chiefly in the stomach, continuing for only two hours; the placenta came away directly. Three days after the confinement was sick and had diarrhœa, "which has continued more or less ever since." The vomited matter was bitter; the motions very offensive. The discharge is said to have been considerable, and to have continued more or less, with the exception of one week; was up and out of doors at the end of three weeks.

September 24.—Complained of pain at the left hypochondrium, extending down the side of the abdomen, also across the lower part of the stomach, which pains were increased after standing or walking; no bearing down;

complexion muddy; the tongue moist, flabby, with milky coating; frequently vomits; bowels purged and motions offensive; water said to be natural; pulse 120, small, soft, yet somewhat sharp; no pain in head; considerable vaginal discharge, which had been red-coloured for the last four or five days. An alterative pill at bed-time, and a mixture containing carbonate of soda, rhubarb, and spirits of ammonia, were prescribed.

28th.—Considered herself better; the pains not felt at night, only after moving about in the day; complexion improved; pulse 104 and soft; vomits less frequently; purging diminished; is very "fidgety;" the red discharge ceased; has not lost flesh. The same medicines were continued.

October 6th.—Said she was quite well; no pain except after walking; the bowels regular, and offensive character gone; appetite good; tongue clean and moist; sleeps well; the pulse 100 and soft; vaginal discharge very trifling; felt as well as this three weeks ago when in the country.

19th.—Again complained of violent pains in the lower part of the stomach and on the hips, which were not relieved by the recumbent position, and prevented her sleeping at night; the pains most felt in the left hip and down the upper part of the left thigh; had continued the medicine to the present time; had not been taking any exertion; could not attribute the increased pain to any cause; the bowels acted regularly; was troubled with flatus, but this not now offensive; tongue clean and moist; appetite very poor; water high coloured, small in quantity, deposited red sediment, not hot in passing; pulse 128, small and soft; a considerable amount of vaginal discharge, nearly white, odour offensive, and left a yellow stain on the linen. Two grains of blue pill with extract taraxicum were directed to be taken at bed-time, and a mixture containing carbonate of soda and hydrocyanic acid twice a day; to use the cold hip bath and the syphon syringe each day.

November 6th.—Lying on the couch complaining of much pain at the lower part of the stomach, and in the

pelvis, as well as round the hips; two days ago was seized with severe pain in the hypogastrium in the night, which passed off after taking warm spirits and water. The vagina was large, lax, thickened, cold to the feel, and covered with a copious mucous secretion, slightly red coloured; lips of the uterus large, slightly irregular, had a distended feel and projected considerably into the vagina; the orifice large and open, admitted the end of the finger; the neck of the uterus also large; the body rather antiverted, and presented a large globular, somewhat elastic and tender body, felt through the upper part of the vagina; considered the catamenia had appeared this morning for the third or fourth time since her confinement. Tincture of Indian hemp, aromatic spirits of ammonia, and bichloride of mercury were prescribed twice a day; rest on the couch.

10th.—The red discharge ceased two days ago; symptoms much the same; condition of the uterus also the same; examined with the speculum, the vagina was large and of a strong bluish tint; lips of the uterus, where covered by the vaginal mucous membrane, large, distended, and of a deep congested purple colour; where covered by the uterine mucous membrane, paler in colour, and raw in appearance; the sound passed between five and six inches into a considerable cavity and occasioned much pain. Three leeches were applied to the uterus; the leech-bites bled freely, the blood being very dark and thick.

14th.—Relieved after the leeches; the pain and fulness at the lower part of the stomach diminished; some pain about the waist, none in the back; vaginal discharge less; uterus generally somewhat decreased in size. The mixture was continued; strong mercurial ointment to be rubbed into each groin at bed-time.

20th.—No pain for the last day or two; no return of sickness; vaginal discharge much less; no tenderness of the teeth or gums. On examination the vagina much as last report; lips of the uterus diminished in size, less dark in colour; the inner surface (raw in appearance) bled readily when touched with the forceps or lint; the body less tender.

Leeches were again applied. The leech-bites bled freely; the blood lighter in colour, thinner, and formed a loose coagulum in the speculum; the same treatment continued.

28th.—Not in any pain; suffered little inconvenience after being about all day; appetite good; no tenderness of the gums. The uterus perhaps further decreased in size; the body less tender to pressure. The lips were scarified and bled freely, the blood of a lighter colour.

December 5th.—Said was quite well, only became tired at night; the uterus probably smaller and softer; examined with the bivalve speculum, the mucous membrane on the inner surface of the lips of a dark red colour, covered with thin white-of-egg mucus and pus secretion, smooth, raw, and granular in appearance, which extended into the cervix. The lips again scarified; the blood of a dark arterial tint.

19th.—Discovered she had only been using a very small portion of the ointment; the uterus much the same; the lips again scarified; the ointment to be used more freely; to continue the mixture.

January 10th, 1865.—A few days after the last report the teeth became tender, the effect was kept up for a fortnight. Ten days ago had slight pain in the right side of the abdomen, and a day or two afterwards the catamenia appeared; the quantity rather free, colour brighter; "had not felt so comfortable since her confinement;" now no inconvenience; says is quite well. The vagina more natural, little or no discharge; the lips and neck of the uterus considerably smaller and softer; the body also much reduced in size, less tender; the sound passed two and a half inches, and caused much less pain; with the speculum the lips were still raw in appearance, did not bleed when touched; the lips again scarified, but little blood flowed, of a brighter colour. The ointment was omitted, the mixture continued.

By continuing this treatment for a short time longer all inconvenience passed away, and she fully regained her health.

It is seldom an opportunity is presented for examining a case so soon, about six weeks, after the confinement. I had

attended the lady previously, though not at her confinement, and knew her to be a strong healthy young woman. The labour appears to have been natural in all respects, the pain continuing only two hours. Three days afterwards she was sick, had diarrhœa, the motions being very offensive; the lochial discharge was considerable, and continued longer than usual. These symptoms are similar to those which follow slight injurious impregnation of the system, and may have been caused by this means.

There is strong evidence for considering these enlargements to be the result of a deficient contraction of the uterus which permits the blood to circulate in the vessels, and by its presence interferes with the degeneration and complete removal of the tissue of the gravid organ.

In a former communication I adduced some facts which appeared to show that the phenomena of puerperal fever were caused by a similar, though to a greater degree, lax condition of the uterus, which allowed the venous sinuses to remain pervious, and the blood and general system to become impregnated with sanious or other deleterious fluids.

Here the uterus was not alone enlarged, for the vagina also retained much of the development consequent upon pregnancy. She complained of pain at the left hypochondrium extending down the side of the abdomen,—evidence of the body of the uterus being affected. But the pains chiefly complained of were situated at the lower part of the stomach, round the hip, down the upper part of the left thigh, increased by standing, and not relieved by the recumbent position, considerable muco-purulent vaginal discharge with offensive odour—evidence of vaginal affection—though the red-coloured discharge was probably derived from the uterine cavity. The vagina was large, lax, thickened, had the peculiar cold feeling produced by congestion of the part, and covered with a copious mucous secretion. The uterus was large, distended, elastic, slightly tender to pressure, somewhat antiverted; the orifice large, open; the sound passing readily into a cavity which measured from five to six inches in length. The vagina was also of a strong bluish tint;

the lips of the uterus of a deep congested purple colour; the mucous membrane of the cervix of the same hue, but paler, and raw in appearance.

Little evidence existed of any active action, though much pain attended the introduction of the sound. In the treatment blood was abstracted locally to relieve the congestion, and mild mercurials administered, aided by vaginal lotions. Considerable relief was soon obtained; but no permanent benefit followed until the system became influenced by the mercurial. The size of the uterus was then much decreased; the vaginal discharge ceased, and all inconvenience passed off.

Case 11.—In the beginning of 1860 I was consulted by Mrs. R—, in consequence of a pain in the left side of the abdomen. Was tall, well made; about thirty-six years of age; had six children, the last confinement being long and severe, with a great deal of discharge afterwards. When she began to get about had a violent flooding which came on suddenly, and with little pain. For some years had suffered from constipation of the bowels, which was only relieved by medicine, the motions being sometimes hard and lumpy. Since a short time after the last confinement had suffered from pain in the left side of abdomen, extending from above the crista illium down towards the symphysis pubis, sometimes extending upwards into the lumbar region; was of a hot burning character, confined to left side of abdomen, not felt on the opposite side; tender to the touch; sometimes could scarcely bear the pressure of the clothes; aggravated by lifting the arm on that side, as when holding a gentleman's arm; sometimes less painful than at other times; felt little of it when in the country; the general health in every respect good; the catamenia regular, but had been much altered of late, the quantity increased, accompanied with much mucous discharge mixed with the red; afterward a thin watery fluid. Had been under different medical men, and treated for ulceration by caustics, but without benefit. The vagina was rather large, thick-

ened, but otherwise healthy. The orifice of the uterus large, admitted the end of the finger; the lips large, somewhat nodulated, especially on the left side; the body large, the left side swollen, tender to the touch, which aggravated the pain in the left side of abdomen; the arteries here felt to pulsate considerably beneath the finger; sound passed nearly four inches and greatly increased the pain. With the speculum the lips were large, somewhat irregular, of a red, raw appearance on the inner surface, which were slightly granular, the left side larger and projecting more than right; no abrasion or breach of surface.

By the occasional application of leeches to the left side of the uterus, especially after each catamenial period, regulating the bowels by gentle saline aperients, and the use of the cold hip bath with the syphon syringe, all inconvenience passed away in a few months.

A long and severe confinement is here followed by a great deal of lochial discharge, and at the end of two or three weeks violent flooding, which came on suddenly and with little pain. Pains about the abdomen appear to have followed; then came the application of caustics, and the usual treatment of this supposed ulceration, without benefit; and followed by reflected uterine pains and disturbance in the catamenial functions.

There can scarcely be any doubt that these symptoms indicated an enlargement of the uterus following the last confinement, with active congestion superinduced on the left side of the organ, whilst the increased mucous discharge, followed by a thin watery flow, afforded evidence that the vagina was also involved. The local examination confirmed these views.

The following case appears to afford an example where further changes have taken place, and the uterus has become hardened.

Case 12.—Mrs. Ann J—, æt. 35; five children; youngest six years of age; no miscarriage; first consulted me in the beginning of November, 1856, suffering from repeated

hæmorrhages, which her medical attendant and a physician in the country, considered arose from cancer in the womb.

The last child was born after a lingering labour; lost a large quantity of blood—more than at any previous confinement; many large clots; a very great deal of afterpains; recovered pretty well, but health was not good, being very weak, and constantly suffering from headaches; nursed the child about eleven months; catamenia reappeared, all very comfortably, about one month after weaning; for between two and three years was pretty well; then became very sleepy; had frequently headaches, and the catamenia came away in little black clots; this gradually became worse and worse, and during the last twelve months had suffered each month from violent floodings, which usually came on suddenly, without any warning, and continued about a fortnight; at first did not take notice of these attacks, until the health became much reduced, and she suffered from pains in the back and stomach, headaches, retchings, palpitation of the heart, and could sleep all day, but not at night; leeches were applied to the back, a blister to the lower part of the stomach; an ointment rubbed in, which made all her teeth loose, and she took much medicine without benefit; had been confined to bed for seven weeks. Looked pale, and rather sallow; had been profusely salivated for a fortnight; mouth still sore; tongue clean, pale; appetite pretty good; a weak pain at chest; bowels very confined, sometimes not moved for two or three days; much flatulency; water clear, free; great palpitation of heart from least excitement; pulse 116, regular, small, feeble; feels very weak; lost much flesh the last few weeks.

A magnesia and rhubarb mixture twice a day was prescribed; also a mixture of dilute sulphuric acid and tannin to be taken if required.

November 11th, 1856.—Much better and looks improved; a pricking pain over the surface of the abdomen; pain at the lower part of stomach; a weak pain in lower part of back; no retching; bowels regular; appetite pretty good; tongue clean; sleeps comfortably; a difficulty to move from

one side to another, from a tight pain over the right iliac region; pulse 100, firmer. The body of uterus is noted as smaller, smooth, not nodulated; orifice very open, admitted nearly two fingers; lips everted, lined on inside with a soft velvety surface; no tenderness on examination.

24th.—Much better; feels as if becoming quite well; feels as if lower part of back was loose, and causes a pain at lower part of stomach; stomach larger; feels nervous; appetite good; bowels larger; sleeps well; feels as if gathering flesh and strength; a little white discharge; catamenia have not appeared for seven weeks. Uterus smaller and softer; lips softer, everted, open; orifice admits ends of two fingers; fundus retroflexed, low down, in hollow of sacrum; sound passed more than three and a half inches, and when uterus replaced by it, only trifling pain felt. The medicine was continued, and the cold douche each morning.

December 2nd.—The catamenia appeared about twelve days ago in profuse quantity; ceased for three days, then had great pain in bowels, and felt very weak; last few days profuse discharge of blood. An astringent mixture was prescribed, and the uterus injected each day with a solution of alum and tannin.

16th.—The injection at first caused little inconvenience, but for last two days has been omitted in consequence of producing so much sharp pain through the left hip, and a dull pain over the whole stomach and down the inside of the thighs. No discharge for some days; looks much improved; pulse 96, soft, regular. The vagina was natural to the feel; the body of uterus large, full, retroverted, uniform, tender to pressure of finger; the lips large, projecting; the posterior larger than anterior; the orifice open as before. With the speculum the vagina appeared natural; the lips of the uterus large, projecting, and on inner surface red, raw-looking, granular, extending as far as could be seen. The bichloride of mercury and Indian hemp were prescribed, three times a day, with the cold douche.

22nd.—Looks and expresses herself as much improved in health; in little or no pain. The local examination as

before. The inner surface of the lips of uterus freely rubbed with nitrate of silver.

January 23rd, 1857.—The caustic was again applied the end of last mouth; catamenia appeared a fortnight ago, ceased for one week, and flooding again came on. The uterus was injected for a few times with the solution of alum and tannin, and the discharge entirely ceased. The medicines were continued.

April 22nd.—Has been very poorly for nearly three months. On 1st of this month a red discharge came on, as if being poorly, then ceased for two days, and on the third recurred very violently indeed for a week, with large quantities of clots. The surgeon in the country applied cold water cloths outwardly, gave astringent medicine, and kept her in bed. After a time the flooding ceased; now a little yellow discharge; a great deal of pain in the left hypochondriac and iliac regions; sometimes a shooting pain towards the groins; looks pale, exsanguine; features hollow; very light-headed; violent headaches across the eyes and at top of head; feels sick; appetite very bad; tongue pale, tremulous; bowels regular; pulse 100, very compressible, rather sharp; water very thick, and not much. The local symptoms were little if at all altered. Muriated tincture of iron prescribed, twice a day.

June 20th.—Had different attacks of flooding, which came on at the monthly periods, and again suffering from it. The uterus again injected with a solution of alum and tannin; large quantities of brown, coffee-coloured, grumous matter came away. About fifteen minutes after each injection, pain of an acute, burning character came on in the left iliac region, round the lower lumbar region, and down the inside of the thighs, which continued for four or five hours, and gradually passed away. The injection also caused the vagina to be very sore and tender. The bromide of potassium was prescribed twice a day, with the bichloride of mercury and Indian hemp, each night.

September 29th.—Has had attacks of flooding, which were restrained by injections of equal parts of tincture of iodine and water. The uterus remains about the same as

before, perhaps a little reduced in size, and the orifice more contracted. The Potassa c. Calce was now freely applied to the projecting lips, which caused much distress, chiefly in the sacral region and round the hips.

December 29th.—Was poorly a week ago; had a great discharge, as usual; felt very faint and weak; continued seven days, and as soon as ceased had great pain across the lower part of stomach and round the hips, which prevented her from standing upright. Attempting to walk caused a violent pain, as if something was out of its place, and, on sitting down, felt as if something was pushed upwards; generally a feeling as of something so dreadfully heavy to carry about with her; shooting, darting pains up the vagina; no bearing down; bowels much confined, and when relieved caused "much pain in the original seat of pain." Still a pale red discharge; felt bodily ill; frequent heats and chills; a continued violent pain, of a burning character, over the whole abdomen, which prevented her sleeping, and only obtained relief by lying on the back. A violent headache over the eyes; no appetite. The uterus retroverted, large, rounded, tender to pressure with the finger, arteries pulsating considerably, especially at anterior part; orifice admits ends of two fingers; lips lobulated; no hardness. Four leeches were applied to the lips, which bled freely, and gave great relief. By rest, gentle saline aperients, and the cold douche, the pains subsided, and the uterus regained its quiescent state.

The notes, which are a repetition of the succeeding, extend over a further period of eighteen months. The attacks of flooding became less frequent and less violent; the Potassa c. Calce was applied at intervals; the size of the uterus became reduced; she gradually regained her health, and has since remained pretty well: only incapable of much exertion, or of lifting any weight.

Here the mother of five children had a lingering labour six years previously, at which she appears to have lost a great quantity of blood, and to have recovered about as usual. She continued pretty well for between two and three years, then became subject to headaches; was very

sleepy; and the catamenia were accompanied with small black clots; the symptoms generally became worse and worse for a period of about two years, when at each monthly period she suffered from violent floodings, which came on suddenly and continued about a fortnight. She became much reduced; suffered from pains in back and stomach, headaches, retchings, palpitation of the heart, &c. She did not receive benefit from the treatment employed; and the medical gentleman consulted considered she was suffering from cancer of the womb. At this time the uterus was large, smooth, not nodulated; admitted the sound more than three and a half inches; the fundus retroverted, lying low down in the hollow of the sacrum; the orifice very open, admitting the ends of two fingers; the lips soft and everted. There does not appear to have been any tenderness, or perceptible pulsation of the arteries; the pains were not severe, and described as a pricking pain over the surface of the abdomen; pain at the lower part of the stomach; and a weak pain in the lower part of the back. The occurrence of severe and long continued floodings at the menstrual periods were endeavoured to be checked by the administration of the usual astringent medicines, but failing to have any effect, the cavity of the uterus was injected with an astringent lotion. The lips of the uterus were now observed to be large, projecting into the vagina, their inner surface being red, raw-looking, and granular, which appearance extended into the cervical cavity as far as it could be seen. The bichloride of mercury was given three times a day, and the cold douche employed in the intervals of the menstrual periods; the lips of the uterus were also freely rubbed with the nitrate of silver. This treatment was not attended with much success; for although the floodings were controlled by the astringent injections into the uterine cavity, yet they continued to recur at the monthly periods. There was now much reflected uterine pains felt in the hypochondriac and iliac regions, with shooting pains towards the groins, and probably arising from the vagina. The injections also caused an acute burning pain in the lumbar region, the iliac

regions, and down the inside of the thighs, whilst the vagina became sore and tender from the same cause. Little permanent benefit, however, followed these measures; and as the uterus was in an indolent condition, the Potassa c. Calce was freely applied to the projecting lips of the organ, with the intention of inducing some modification in the state of the uterus. Considerable local inflammation followed this application, which it was necessary to reduce by the application of leeches to the uterus, the cold douche, and saline medicines. But the condition of the uterus was influenced; the floodings became less frequent and less severe. The application of the Potassa c. Calce was repeated at intervals; and after a treatment, with intermissions, but extending over a period of two and a half years, her health improved, the floodings ceased, and she has since enjoyed fair good health.

From these cases we may conclude that enlargements of the uterus, the consequence of previous impregnation, may exist for a considerable period without giving rise to any particular inconvenience to the female. When present to such an extent as to form a tumour somewhat tender to pressure, and of greater or less size in the hypogastrium, it is usually attended with a feeling of weight or discomfort at the lower part of the abdomen, some enlargement of the abdomen from flatus, a feeling of general weakness, transient and shifting pains in the walls of the abdomen, a weakness or aching pain in the lumbar region, particularly after slight exertion, unrefreshing sleep, and other indications of slight general disturbance. But the point of most importance is the tendency to severe hæmorrhage, which assumes two principal forms:—(*a*) occurring shortly after the parturition or abortion, and produced without any appreciable ease; and (*b*) coming on with the reappearance of the menses, being increased at each recurrence of this function, and gradually passing into severe hæmorrhage. As I have previously remarked, in all cases of hæmorrhage that I have seen, shortly after the expulsion of the ovum the uterus has been much larger than it ought to have been at that period, and the hæmorrhage has apparently arisen as a consequence

of this enlargement. But the other form comes on more insidiously, and appears to be produced by the congestion which attends the catamenial function. The period of its occurrence varies considerably according to the amount of enlargement. In some instances, after the catamenia have appeared two or three times, generally increased in quantity and prolonged in duration, considerable hæmorrhage will take place and continue for months, resisting all the usual remedies for restraining it. In other cases the woman will recover most of her usual health, and when the catamenial function is re-established, the symptoms of congestion of the uterus gradually supervene, which end in the occurrence of considerable hæmorrhage commencing at one of the menstrual periods. These profuse losses are frequently considered to be early abortions, and when the blood is retained and coagulates in the cavity of the uterus, it is expelled with expulsive pains so as closely to simulate an expulsion of the ovum. Not unfrequently the blood coagulates in the upper part of the vagina, which, upon being expelled with some pain, is also considered to be the product of impregnation. I have, however, examined a considerable number of these coagula which have been produced as an evidence of a "substance having passed," and I have never been enabled to detect anything more than coagulated blood. Still there can be little doubt that early abortions do take place; for the open state of the orifice and cavity of the uterus leads to ready impregnation where these enlargements exist.

When congestion supervenes upon the enlarged uterus, or when this passes on to inflammation of the whole organ or any portion of it, the additional signs of these morbid states become added, and the reflected uterine pains are present to a greater or less degree in accordance with the extent of the morbid action, the natural constitution, and state of health of the individual. In sanguine and nervous temperaments, and in debilitated states of the health, the pains and general disturbance are greatly intensified. Much pain is complained of in the lumbar region, extending into the iliac regions; or the hypochondriac regions. Sometimes

it is chiefly felt in the neighbourhood of the umbilicus; and when severe extends over the whole of the abdomen, the surface of which becomes very sensitive and tender to the touch, and passes down into the inside of the thighs. The profuse and long-continued discharge at the menstrual periods continuing and being somewhat increased; but unless the vagina be implicated there is not any leucorrhœal discharge. Although the cavity of the uterus be enlarged with the mucous membrane in an hypertrophied state—and no doubt there is more secretion than usual from its surface—yet this does not appear to be in sufficient quantity to constitute a leucorrhœal discharge. The same may be said of the glands in the neck of the uterus, which are sometimes enlarged and filled with their peculiar white-of-egg mucus which comes away in the characteristic pellets; but I have never known the secretion of these glands to become so altered as to resemble the mucus secreted from the vagina.

When the vagina is also implicated and remains enlarged, with its walls thickened, and when it becomes congested or inflamed, the symptoms which indicate this affection are also present. There is weight and bearing down in the pelvis, and pain at the lowest parts of the abdomen, pain in the sacral region extending round the hips, and sometimes down the outside of the thighs, with more or less vaginal discharge, which varies in character according to the morbid processes which exist. Not unfrequently this congestion and inflammation is located at the upper part of the vagina, and the membrane covering the lips of the uterus, when it gives rise to troublesome symptoms and a rebellious mucous discharge. Not unfrequently also the congestion extends to the rectum, and is then attended with the usual signs of congestion of this part.

After these symptoms have existed for any length of time, and especially in that form of the affection where further changes have taken place, and the organ becomes firm and hardened, the general health becomes implicated, and we meet with, in addition to the previous symptoms, the evidences of much constitutional disturbance. A feeling of

great weakness and depression, sleepless nights, or short sleeps disturbed with horrid dreams, great irritability, impaired memory, pain at the top or back part of the head, sometimes across the forehead, palpitation of the heart, general pallor, want of appetite, frequent retching and sickness, confined bowels, and much loss of flesh.

The great tendency of the uterus when thus enlarged to become altered from the usual position, and after a time to become bent upon itself—antiverted, or retroverted—has already been adverted to. But these changes appear of little import, and, of themselves, to produce no morbid symptoms. When the organ is somewhat prolapsed, and pressed by the superimposed abdominal viscera into the hollow of the sacrum or against the pubis, much inconvenience is no doubt induced. It would, however, lead beyond the limits of these remarks to enter further upon these points. The obstruction of the canal caused by the bending of the organ, however, seriously interferes with impregnation, and usually produces sterility.

The local signs are sufficiently well marked to remove all difficulty in the way of diagnosis. The uterus is equally enlarged, elastic, and readily moveable in the pelvis. The orifice large, open, smooth; sometimes occupied with white-of-egg mucus. The lips large, round, and smooth. In consequence of the uterine cavity being also enlarged the sound readily passes to a depth varying from three to five or six inches, and by it the organ is felt to be readily moveable. There is no tenderness, nor heat in the part, nor are the arteries felt to pulsate, except when inflammation be also present, when these signs are added to the general enlargement. The mucous membrane of the uterine cavity is much deeper-coloured than usual, and has a red, raw appearance, which terminates by a well-defined margin where it joins the mucous membrane of the vagina. The glands and other structures at the orifice frequently remain enlarged, and when the secretions are of an irritating character the epithelium is thrown off to some extent. But the lips are not always uniform. One, especially the posterior lip, often

becomes congested, of deeper colour, and longer than the other. The subsequent changes often render them lobulated, and not unfrequently they assume somewhat the appearance of the ends of the fingers surrounding a common centre. This is chiefly noted where the uterus has become firm and hardened. In examples where the vagina is implicated, this organ is large, the walls thick, often giving a peculiar cold sensation to the finger, and lubricated with mucus, muco-pus, pus, or a thin watery secretion. When inflamed it becomes hot, tender, and the arteries in its walls pulsate with more or less force.

It will be noticed that the symptoms and appearances sketched as being present in these enlargements of the uterus are precisely those which have been so frequently described under the term ulceration. I have no intention of discussing this question at present, and yet I can scarcely pass it over without a few remarks. I believe it is now generally conceded that much more importance has been attributed to this supposed ulceration than it is entitled to—that if it does occur it is an exceedingly rare disease—and that if present it does not require any special treatment, being only a sign and consequence of other disease present at the same time. Much, however, of the difference of opinion upon this subject appears to rest upon the signification applied to the term—ulceration. Until a recent period ulceration has been considered a destruction of the tissue gradually produced by disease, and generally accompanied by the secretion of pus. But of late the term has been applied to any red and swollen tissue from the surface of which exuded either mucus, muco-pus, or pus; and if there happened to be ever so small a shedding of the epithelium this was construed to be an undeniable sign. This appears to be a manifest misapprehension of the term. I concur with Dr. Arthur Farre, that the distinction mentioned by Mr. Paget is correct; namely, "to regard as abrasions or excoriations those conditions in which the epithelium or epidermis of an inflamed part is alone removed, and those only as ulcerations in which the removal extends further to the vascular or

proper tissues beneath the epidermis." ('Cyclop. of Anat. and Physiology.')

In the preceding cases, which presented all the signs and symptoms usually attributed to this supposed disease—ulceration—there was not even an abrasion or shedding of the epithelium.. I must admit that, so far, I have not met with one unquestionable case of non-specific ulceration of the lips of the uterus unconnected with the puerperal state, although I have taken the utmost pains to discover one. I have seen a few cases where the epithelium of the vagina, after being much thickened and raised in the form of bullæ, had been thrown off, leaving the surface of the membrane beneath exposed. This thickening of the epithelium gave a deceptive appearance of destruction of the surface of the membrane, which remained, however, perfect. But the principal of these supposed ulcerations consist in what Dr. A. Farre terms "morphological varieties," and "hypertrophies" of the natural tissues of the part. He truly adds: "More rarely, if ever, do ulcers occur upon the uterine neck as the result of simple inflammation, fulfilling the conditions that would enable them to be admitted into the category of true ulceration."

These observations received much confirmation from the records of the Pathological Society of London, which has now been established for more than fifteen years. It would be impossible to estimate too highly the labours of the various members, or the valuable collection of facts recorded in their 'Transactions.' Yet I believe I am correct in saying that no one has met with, or at least has ventured to present to the members, a single example of non-specific ulceration of the uterus; from which it appears a fair deduction that, if this morbid condition exists at all, it must be of exceedingly rare occurrence.

Amongst the causes to which this enlargement has been attributed are placed—rising too soon after confinement, repeated miscarriages and metritis.* But I think we must extend our inquiries a little further before we arrive at the

* Prof. Simpson, "Clinical Lectures," 1861.

more probable cause. It is difficult to conceive how rising too soon can produce this effect, provided the uterus has been efficiently and permanently contracted; but if there be imperfect contraction, or a tendency to a lax condition, it is doubtless of importance to maintain the horizontal position, and to avoid all causes likely to produce a disturbance in the circulation of the organ. It is also difficult to perceive the necessity of repeated miscarriages, when one alone is sufficient to produce it. The preceding cases further cast a doubt as to the fact of the repeated miscarriages; for without doubting the possibility of them, it is very probable that the hæmorrhages which attend these enlargements have often been attributed to a miscarriage without sufficient cause. My own observations lead to the conclusion that the principal causes of these affections are—(*a*) a want of efficient contraction of the uterus after a confinement, so as to permanently close the vessel of the organ; and (*b*) a partially developed state of the uterine tissue, which appears unfavorable to the changes necessary to its subsequent reduction.

During a close attention to these cases for some years past I have invariably found that where the uterus has not been efficiently contracted after parturition, this affection was very liable to follow; and, on the other hand, that where impregnation did occur in cases of enlarged uterus, the physiological changes which took place were by far the most effectual means of cure. Further, the enlargements did not reappear when I was successful in procuring a complete contraction of the organ; but they did reappear where the pains were languid, and where a firm and complete contraction of the uterus could not be induced. Independent of the firm, cricket-ball character of a completely contracted organ after parturition, the signs of a want of efficient contraction are sufficiently well marked in the course of the convalescence. There is generally a larger loss of blood after the birth of the child than usual; an absence or only a trifling amount of afterpains; a more profuse lochial discharge than customary, which is also of a deeper red colour, and

continues red-coloured longer than it ought naturally; a feeling of general weakness; transient pains at one or both sides of the abdomen and in the lumbar region, with other symptoms of uneasiness; whilst unusual weight and discomfort at the hypogastrium are not uncommon. When these symptoms have been present, I have very generally found that the reduction in the size of the gravid organ was not progressing favorably, and that it finally became arrested before its ultimate completion. Assuming these observations to be correct, the explanation of this cause would appear reasonable. It may, I think, be stated as an acknowledged fact, that the degeneration and subsequent removal of the tissue of the gravid uterus takes place more readily and more completely in proportion as all supply of blood is efficiently cut off from the organ. If the vessels, then, be not completely closed, and any blood circulates through their canals, the tissues are supplied with a source of nutriment which will greatly interfere with the process of reduction.

A similar cause appears to exist in cases of abortion; for here, as is well known, it is difficult to procure a complete contraction of the partially developed muscular tissue, and the vessels remain pervious to the flow of a certain amount of blood through them. But, in addition to this, it would appear that the partially developed tissue does not take on the process of degeneration so readily as that of the fully developed organ, and that its complete reduction is more readily interfered with.

The presence of inflammatory action, as in metritis, will cause an increased flow of blood to the organ, and doubtless interfere with the processes of degeneration. But it is questionable whether this is of frequent occurrence, and whether the symptoms said to indicate its presence—rigors, and in a day or two pain in the hypogastric region, and in the back and loins—are sufficient to diagnosticate this morbid action. These symptoms attend any injurious impregnation of the system consequent upon a lax state of the uterus; and they may be, after all, only further evidence that the uterus did not remain efficiently contracted after

the completion of the parturition, so as to completely close the blood-vessels of the part.

With respect to the treatment, the first object, when severe hæmorrhage is present, must be to arrest this discharge. Sometimes this is effected by the usual means employed—rest, freedom from excitement, and the dilute acids, with or without the addition of other astringents. But other cases occur, and these a rather numerous class, where these means fail, and the hæmorrhage continues, sometimes more, sometimes less, for an indefinite period; whilst further changes are taking place in the uterus itself. In these instances I have long been in the habit of injecting the cavity of the uterus with astringent lotions. Generally the solution of alum and tannin has quickly arrested the hæmorrhage; in other cases I have used the preparations of iron; and in some rebellious examples a strong solution of iodine. I have now employed this treatment in a large number of cases, and so far, not only without any unfavorable results; but, on the contrary, it has appeared to quickly and effectually arrest the hæmorrhage, as well as to lead to a reduction in the size of the uterus, by inducing further changes in the organ. The action of injections upon the uterine cavity has also appeared to increase the efficacy of other astringents given at the same time.

A feeling still prevails that the uterine cavity cannot be injected with astringents without the risk of serious consequences, and severe inflammations, and even death, are said to have followed their employment. I have not been enabled to refer to any of these cases to ascertain the precise conditions wherein the injections were employed and these serious consequences ensued. But the cases which have been narrated show, I think, that injections may be employed, not only with impunity, but, in the cases in which it is applicable, with benefit.

Professor Simpson, when speaking of the treatment of membranous dysmenorrhœa,* has strongly condemned the practice. He recommends the administration of bromides

* "Clinical Lectures on the Diseases of Women," 'Medical Times and Gazette,' March, 1859.

and iodides, and "the local application of mercurial preparations, putting the uterus, as it were, through a sort of independent mercurial course." And in more obstinate cases the direct application to the lining membrane of the uterus of powdered nitrate of silver, powdered iodine, perchloride of iron, &c., by means of an instrument resembling the *porte-caustique* of Lallemand. He then adds:—"But, mark you, never think or dream of throwing liquids into the interior of the uterus by means of any injecting apparatus, for severe and fatal inflammations are very likely to ensue. Such a result may, perhaps, be caused by the fluid running along one or other patent Fallopian tube, and escaping into the peritoneum; more probably it may be due to laceration of the mucous membrane, and entrance of fluid into one of the uterine veins; but however it may be produced, the consequences of injecting fluid into the cavity of the womb are so often dangerous and deadly, that the practice has now been given up, I believe, by all accoucheurs."

With all deference for this opinion, I am forced to say my experience is opposed to this conclusion; and the reasons given for it appear to be untenable. I believe it to be scarcely possible with any amount of force which can be used to inject fluids from the uterine cavity along the Fallopian tubes. And when we remember that in these cases no force can be applied—for the orifice of the uterus is open to admit the end of the finger, and the fluids have a ready and easy exit from the uterine cavity—the danger spoken of becomes, if possible, more problematical. Nor does there appear any means adequate to lacerate the uterine mucous membrane, nor any veins in the unimpregnated uterus into which the fluids can gain an entrance. At least, in all the preparations I have examined, I have never seen such veins, and must doubt their existence.

Yet there cannot be a doubt that serious and even fatal consequences have followed the injection of strong fluids into the uterine cavity. So far, however, as I have been enabled to judge from the instances recorded—and possibly

these cases of membranous dysmenorrhœa may be of the same character—the mischief has arisen from employing the injection in instances where inflammation of the uterus previously existed. In these cases strong injections may greatly aggravate the existing inflammatory action; but in examples of enlargement resulting from previous impregnation, where the actions of the organ are perfectly quiescent, I have never seen the least evil consequences to follow, and frequently no further treatment was required.

When congestion takes place in these enlargements, it becomes necessary to resort to local depletion—either the application of leeches to the lips of the uterus, or scarifying the part with a sharp and fine-pointed bistoury. On the occurrence of inflammation it will be requisite to employ local depletion to a greater extent, and to repeat it more frequently. In both instances it appears especially serviceable soon after the cessation of the catamenia, in order to remove any local congestion which may remain. The milder mercurial preparations are also attended with much benefit, when carried to the extent to produce slight salivation—either repeated doses of blue pill, or the mercurial ointment applied to the upper part of the thighs. Dr. Simpson speaks of "the local application of mercurial preparations—putting the uterus, as it were, through a sort of independent mercurial course." But I have not obtained so much benefit from this mode of treatment as I anticipated. Many women object to the frequent and continued introduction of pessaries, and when any vaginal discharge has been present, these discharges, being of a watery nature, have appeared to prevent remedies of an oily character from exerting their due influence upon the tissues of the part. Occasionally, however, I have found them of considerable benefit, and especially in those cases where the vagina was implicated in the enlargement. As a rule, the watery solutions employed as injections into the vagina, with sufficient care to ensure their introduction to the whole extent of the canal, have appeared to me the most efficacious.

In those instances where the uterus has become firm and

hardened, the remedy of most power appears to be the bichloride of mercury combined with the Indian hemp. By their continued use the organ frequently becomes softer and gradually reduced in size. But cases now and then arise where these remedies appear to be ineffectual, and it becomes necessary to resort to other means. Here the application of a strong escharotic to the lips of the uterus—as the Potassa c. Calce—sets up an amount of local inflammation, and so changes the actions of the part as to enable the previously inert remedies to exert a beneficial influence. But the use of strong escharotics should be carefully restricted to those cases where no inflammatory action is going on, either in the uterus itself or in the vagina, otherwise distressing consequences may follow.

In conclusion, it should not be forgotten that examples are too often met with where all our remedial agents fail, and the female falls into a state of shattered constitution and irremediable bad health, with much suffering. Let us hope that the number of these cases will become smaller and smaller as our knowledge of them advances. It is this hope which has chiefly induced me to draw up the preceding cases and remarks, which I fear offer but an imperfect outline of the many phases and complications they present in practice.

The PRESIDENT observed that he continued the practice of injecting a solution of perchloride of iron into the uterus to arrest hæmorrhage after abortion and labour, and with excellent effect. He no longer dreaded flooding as of old. So far he could illustrate by experience the safety of intra-uterine injections. But he thought a more desirable method of applying the fluid styptics or caustics to the inner surface of the uterus would be by swabbing; that is, soaking a bit of sponge or cotton-wool in the liquid, and passing it into the cavity. He had contrived an apparatus for this purpose. An excellent plan of applying solid nitrate of silver was one he had learned from Sir Benjamin Brodie. That eminent surgeon dipped a silver probe in fused nitrate of silver, thus obtaining a thin stratum, which could be passed freely and safely into a sinus. This was the safest way of cauterizing the inner surface of the cervix or body of the uterus.

Dr. GREENHALGH said that Sir J. Y. Simpson had described these enlargements under the terms of subinvolution or incomplete involution of the uterus. He (Dr. Greenhalgh) quite agreed with the author as to their frequency and the obscurity of the local symptoms. He regarded it as a common cause of sterility, but that where impregnation resulted it was always curative except where abortion ensued. In this disease he had found the uterus enlarged, flabby, and ill-defined, the sound entering an enlarged cavity four inches, and even seven inches and a half. He considered that hæmorrhage was not a frequent symptom in this disease, and where it did exist was mainly attributable to some affection of the lining membrane of the uterus. He advised, where hæmorrhage was frequent or profuse, so as to affect the general powers and resist the ordinary treatment, the injection of the compound tincture of iodine into the uterus; but laid great stress upon the importance of first freely dilating the internal os uteri, which dilatation in itself was more or less curative. He had found resolvent and sedative pessaries of value, as also douches of tepid and cold water with a Kennedy's syringe, and medicated fluids. He likewise advocated the administration of tonics, with the iodide of potassium and liquor of the ergot of rye, and alterative doses of the bichloride of mercury. He relied greatly for success upon improvement of the general health, out of some impairment of which this affection frequently originated and persisted.

Dr. WYNN WILLIAMS agreed with much that had been stated, but, remarking on that portion of the paper alluding to the ulceration of the os uteri, he considered there were various degrees of ulteration in mucous membranes as well as in the skin, according to the strength and nature of the irritant. Fortunately the mucous membrane covering the os and cervix uteri is not ordinarily exposed to an irritant powerful enough to produce the amount of ulceration which we so often see in prolapsus uteri. He found that superficial ulceration, or excoriation, happens when perverted or irritating secretions remained in contact with the mucous membrane of the os and cervix uteri. For treatment he relied on constitutional and local remedies, and found nothing answer so well as the injection of weak solutions of iodine. As before stated to the Fellows of the Society, he considered iodine as perhaps the most powerful disinfectant or decomposer of the products of animal decomposition we possess.

Dr. RASCH said he saw a great number of cases of subinvolution of the uterus, in some of which the sound would pass six or seven inches. Careful bi-manual examination left no doubt that there were no tumours in the uterus, the walls being in some cases quite thin and flaccid, like a bladder. He had often practised intra-uterine injections. He had mostly used acet. pyrolig., recommended by Carl Mayer, though not for this purpose.

Diluted with equal parts of water it had often checked obstinate flooding, and not produced untoward symptoms. The patient should stand or walk after the injection, to allow the fluid to gravitate out of the uterus. He thought, before injecting, if any flexion of the uterus existed, it should be known, as this prevented the ready outflow of the fluid. To distinguish between broken and merely reddened mucous membrane on the os uteri, he used, with a brush, a solution of nitrate of silver. The parts denuded of membrane presented an appearance strikingly different from those which were covered.

WEDNESDAY, MARCH 7th, 1866.

Dr. BARNES, President, in the Chair.

Present.—46 Fellows, 12 Visitors.

THE following gentlemen were elected Fellows of the Society:—N. Avent, Esq., Stamford Villas; R. Blagden, Esq., Stroud, Gloucestershire; J. H. Bryant, Esq., Sussex Square; George B. Brodie, M.D., Bolton Row; Thomas Dane, Esq., New Finchley Road; W. Dewsnap, Esq., Hammersmith; John Easton, M.D., Connaught Square; R. A. Elliott, Esq., 95th Regiment, India; C. B. Fox, M.D., Scarborough; John Loane, Esq., Whitechapel; Wm. Soper, Esq., Stockwell; H. Winterbottom, Esq., Manchester.

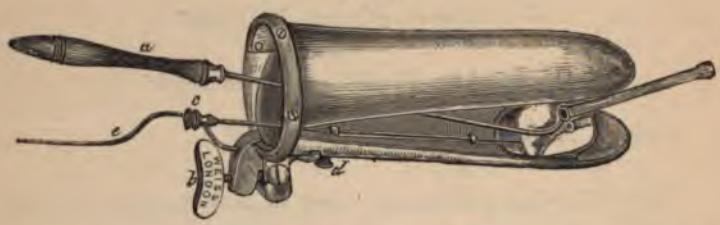
Prof. Lazzati, of Milan, and Prof. Hugenberger, of St. Petersburg, were elected Honorary Fellows.

Dr. TYLER SMITH exhibited a new speculum, which is represented in the annexed sketch. (See next page.)

He stated that he had used it constantly for the last two years. It is made in the form of a double duck-bill, and possesses all the advantages of the ordinary bivalve speculum. The flattened shape of the extremities makes it of less size, and consequently more easy of introduction. There is also another advantage: you get rid of the plug, which was always dirty and getting out of order, thus being a continual source of annoyance and inconvenience. This speculum is to be introduced in the direction of the genital fissure. When it is fully introduced, and reaches the lips of the os uteri, it is necessary, be-

fore proceeding further, to dilate the lips of the speculum, and to withdraw it a little from the os, otherwise the

Fig. 6.



ends are liable to catch the lips of the os uteri. During the two years he had used this speculum he had experienced a greater facility in examining the os uteri, so that it was practically better than the ordinary bivalve speculum.

Dr. Barnes observed that at their last meeting he had mentioned a plan for cauterizing the cervix uteri by dipping a uterine sound several times into a strong solution of nitrate of silver, allowing the nitrate of silver to dry on the sound, thus giving it a coating; then by introducing the sound into the cervix uteri and turning it round you easily and efficiently effected your object. This was simply the adoption of a plan that the late Sir Benjamin Brodie adopted. He used to dip a probe into a strong solution of nitrate of silver, and then insert the probe into sinues which he desired to cauterize. Since their last meeting he (Dr. Barnes) had had a rod made after the fashion of a uterine sound, for the purpose of cauterizing the cervix in the manner already described.

Mr. Baker Brown, Junior, exhibited a child which had been born with amputated upper and lower extremities. The mother, æt. 25, had been married three years, and been delivered of three children. The first two, both female, were born at full period, and of normal development. The third, a male, now shown, was born on the 1st of January of

the present year, and presented an appearance similar to that seen in the accompanying drawing taken from life by Mr. Brown. The umbilical cord was very long, being coiled once round the neck and twice round the body. As there were no remains of the extremities found at birth, and

FIG. 7.

from the probable age of the cicatrices, the amputations evidently took place at a very early period of fœtal life; but this was an interesting example of the *post hoc, propter hoc* principle, a tale having been told of the mother, when between four and five months pregnant, meeting and taking

unusual notice of two men, one of whom had lost his arms, the other his legs.

These cases were not uncommon. Mr. McLoughlin, of Preston, had communicated a case to the 'Medical Times and Gazette,' December 10th, 1853, resembling the present one even in the minutiæ. In each there was a well-marked cicatrix as of circular amputation of the arm, without the least attempt at reproduction. In each the right arm was the larger; in each there was on the right lower extremity a nipple-like protuberance, probably a rudimentary toe. And, finally, in each there was on the left lower extremity an appendage from the stump, which Mr. Brown believed resembled the sole of the foot.

In conclusion, Mr. Brown drew attention to the elaborate essay of Mons. Debout, "Sur les vices de Conformation des Membres," published in the 'Mémoires de la Société de Chirurgie,' March, 1865. That gentleman showed by several cases how, with the help of Mons. Charrière, he had been enabled to supply most ample movement in artificial limbs, even to patients who had lost both upper and lower extremities. These artificial substitutes had also been brought to great perfection in this country by Messrs. Gray, Heather Bigg, &c.

In answer to the President, Mr. Brown said there was no other evidence of arrested development as cleft-palate. The child was well-nourished and in excellent health.

Dr. Tyler Smith called attention to the peculiarity of the thigh stumps. It appeared to him that after the amputations of these extremities nature had made an attempt at reparation, analogous to the reparation which takes place in crabs, &c. The lower classes of animals, when deprived of a limb, are compensated for that loss by a reparative process whch results in the formation of a limb more or less perfect. On carefully examining the thigh stumps there appears to be something like the formation of two toes on the one, and something very like the formation of the whole number of toes on the other; but with respect to the arms this reparative process is not evident.

FIBROUS TUMOUR OF THE UTERUS.

By Henry M. Madge, M.D.

Dr. Madge exhibited a fibrous tumour, attached to the uterus, taken from a woman who had destroyed her life by taking oxalic acid. She was about forty years of age; had enjoyed good general health; catamenia always regular, and never had any symptoms indicating the existence of the tumour. She was married, or rather had lived after the manner of a married woman, for many years, but had never been pregnant. The tumour appeared to spring from the posterior part of the body and neck of the womb, and was found lying loosely, that is, without adhesions to surrounding parts, in the abdominal cavity. The uterus and appendages are, in a manner, spread out on the surface of the tumour, and adhere to it posteriorly by slight adhesions. As usual in these cases the uterus is elongated, it measures about five inches in length; the os uteri is drawn up, and its place in the vaginal wall is recognised by a very small opening—a mere pinhole.

The uterine cavity, however, is quite pervious. Sometimes it is obliterated by the pressure of the tumour, and hence one cause of sterility. As I was unable to find the uterine openings of the Fallopian tubes by dissection, I placed the preparation in water, and on raising their fimbriated extremities and inflating the tubes with air, air-bubbles came up through the water. I afterwards injected water through the tubes, but air appears to be a finer test of their permeability. The ovaries are diseased and shrivelled, and have evidently been so for a considerable time—accounting in this case for the sterility. The whole preparation in the fresh condition weighed about two pounds, and the tumour measured fifteen inches in circumference. The substance of the tumour, though possessing the usual elements of fibrous tumours, is of that complex structure which is said to be more likely than the simpler forms to go on growing

indefinitely. Dr. Madge further remarked that should the necessity ever have arrived of removing the tumour during life, the womb would have to be removed with it, and its removal under such circumstances would not appear to add anything to the difficulties or to the importance of the operation.

CASE OF RETENTION OF A FŒTUS IN THE ABDOMEN FORTY-THREE YEARS.

By R. W. Watkins, Esq., F.R.C.S., Towcester.

(Comunicated by Dr. Barnes.)

On the 10th of January, 1866, I visited by request Elizabeth J—, æt. 74, widow of William J—, a small village shopkeeper at Stoke Bruerne, Northamptonshire. She gave me the following history, which I will narrate as nearly as possible in her own words.

About forty years ago she was in labour with her second child; her first, born two years previously, having had water in the head, had survived its birth only a few hours. The labour being very lingering, they had sent for my late father, who attended her and remained with her during the night. On the following day, being very busy, and the labour having made no progress, he left her in charge of the midwife who was in attendance upon her. The pains were lingering, but not very severe. On the third day she "suddenly felt something drop down inside her, and the child, the movements of which she had constantly felt up to that time, at once became cold as a stone." She was in great pain, and my father attended her for a considerable period; she refused to allow any other surgeon or physician to attend her, or to have any operation performed. She gradually improved in health, although she was very weak for a long time, but did not decrease in size for several years. Upon examination, I found her much emaciated, with a hard, bony

tumour in the lower part of the abdomen, exactly resembling the fœtal head; it could be easily moved from side to side, and on careful manipulation I believed I felt the back part of the thorax in close approximation to it. She was evidently sinking from chronic renal disease, and, knowing that her end was approaching, had sent for me to request that I would make a *post-mortem* examination. She had previously made a similar request to Mr. William Knott. The story was corroborated by some of her neighbours, and by the rector of the parish, who had heard from my father (who died in 1844) a full report of the case. It was also stated that at different times three little bones, "like finger-bones," had come away from her, but they had not been preserved. On referring to old ledgers, I found the entry of the attendance on the 8th October, 1822, in the handwriting of my grandfather, with the subsequent payment of the fee marked in my father's handwriting, and with his initials.

The woman died on the 13th January, 1866, and the examination was made on the 15th, by Mr. William Knott, in the presence of Mr. Knott, senr., Mr. Garlike, and myself. On making an incision through the abdominal parietes, and opening the peritoneum, we immediately observed a hard white substance, which proved to be the vertex of a fœtal skull; and on enlarging the opening a perfect fœtus was extracted without difficulty. It was covered with plastic lymph; the limbs were flexed anteriorly on the body, and the head bent forwards to meet them, in the manner usually depicted in plates of the gravid uterus. It was attached by the umbilical cord to a vascular tumour, about the size of half an orange, which appeared to be the atrophied placenta, and which was connected by ligamentous attachment to the peritoneal covering of the broad ligament near the left ovary. One portion of this vascular tumour appeared to be a mass of unorganized lymph, enclosing fluid. Neither the fœtus nor the supposed placenta had any adhesions to the peritoneum except the ligamentous attachment I have already mentioned. The uterus was perfectly natural; there was no cicatrix or other marks of injury on any portion of

its surface. The ovaries were pale, but quite natural in size and form. There were no adhesions of the peritoneum in any portion of the abdominal cavity, and no appearance of previous inflammatory action in any part of the large or small intestines. The kidneys were extensively gorged with venous blood, and very friable, the left being more affected than the right. The spleen was much congested and friable. The stomach and liver healthy, the gall-bladder containing about twenty hard, dark gall-stones. The pancreas was very much diminished in size in front of the aorta, and immediately above the inferior mesenteric artery, to which it was connected by condensed cellular tissue, was a white encysted tumour, about the size of a hen's egg, containing a milky fluid.

The above extraordinary case is, so far as I am aware, quite unique, and will be interesting, not only as an instance of recovery from tubular gestation, and probably rupture, but also from the comparatively slight local and constitutional effects of a foreign body retained in the cavity of the peritoneum for more than forty-three years.

Dr. Barnes exhibited another mummified fœtus, with cord and placenta, that had been expelled from the uterus after the birth of a full-term child. He remarked that this was one of those cases that had been adduced to support the hypothesis of superfœtation. He (Dr. Barnes) believed that in this case there was a double conception; that one fœtus was arrested in its development by the greater vitality of the other. Such cases might possibly be regarded as offering some illustration of Mr. Darwin's theory of the extinction of the weaker types of animal life by the progress of the stronger.

These cases are not frequent, but there is a very analogous one in the "Maladies du Placenta" in Cruveilhier's great work on 'Morbid Anatomy;' also, a few years ago, Dr. Meadows brought a case before the notice of the Society, an account of which was published in the 'Obstetrical Transactions.'

Dr. Braxton Hicks exhibited a specimen of the Echinococcus, which had been discharged from the vagina.

Dr. Walker, of Peterborough, read the history of a case of Ruptured Vagina during Labour.

ON THE USE OF THE ACTUAL CAUTERY IN OVARIOTOMY. ILLUSTRATED BY ELEVEN CASES.

By Baker Brown, Esq., F.R.C.S.
SENIOR SURGEON TO THE LONDON SURGICAL HOME.

On the first day of February 1865, I placed before the Society my first case of ovariotomy, in which the pedicle was divided by the "actual cautery."

Since then I have published some ten or eleven more in the 'Lancet.'

I now propose to relate my last eleven cases of "*Complete Ovariotomy,*" and afterwards to offer a few practical observations on the use of the actual cautery.

Case 1.—*Multilocular ovarian tumour of two and a half years' duration; one tapping; ovariotomy; recovery.*

(Abridged from notes by Dr. Bottle, House-Surgeon.)

M. B—, æt. 37, single. Two years and a half ago was attacked with pain and weakness in back and general malaise, and first noticed swelling of abdomen, more noticeable on right side; no pain in seat of tumour. Last summer, she says, after passing a very large quantity of healthy-looking "water," the swelling greatly diminished; began to increase again rapidly in November last. Was tapped six weeks ago, and nine pints of fluid evacuated. Catamenia irregular, latterly profuse; menstruation con-

tinuous for last three weeks; abdomen thirty-five inches in circumference; fluctuation distinct in every direction.

Chloroform having been given, an incision was made five inches long, peritoneum opened, and a considerable quantity of fluid escaped; the various cysts were punctured and about ten pints of fluid evacuated; the tumour was removed from abdominal cavity, there being no adhesions; pedicle, which was broad and thin, and attached to the left ovary, was divided by actual cautery and returned, the wound being closed with silver sutures.

Slight pain in right iliac fossa next day, relieved by poultices and little opium; towards middle of second day tympanitis, &c.; signs of peritonitis in left iliac fossa supervened. Six leeches, and one grain of opium by rectum; pain relieved; pulse continues quick (130 and upwards); quinine every four hours; reduced the circulation, continued in one grain doses. Tympanitis still remained, and on the sixteenth day offensive pus escaped from lower edge of wound. From this date the patient progressed well, and on the twenty-sixth day was able to walk from one bed to another.

Case II.—*Multilocular ovarian tumour of twenty months' duration; ovariotomy; recovery.*

(Abridged from notes by Dr. BOTTLE, House-Surgeon.)

S. H—, æt. 35, married; has had six children. While weaning her fifth child was seized with intermittent fever (daily shivers), was confined to bed for eight weeks. At this time she first perceived the tumour, which has since increased gradually. She again became pregnant and went to full time, catamenia regular up to this last pregnancy; no return since; general health very indifferent; previously costive, now suffers from diarrhœa. A large ovarian tumour apparently with adhesions found on examination. After a short course of tonic treatment was discharged to recruit her health, previous to operation.

Readmitted August 15th, 1865. Health greatly improved; catamenia quite regular; fancies abdomen smaller;

measures thirty-nine inches; tumour almost globular, does not extend above umbilicus; fluctuation distinct; considerable superficial tenderness in right lumbar region; uterus drawn up considerably.

Whilst under the influence of chloroform an incision six inches long was made, exposing an ovarian tumour, free from adhesions, in front and laterally; trocar evacuated about eight pints of genuine pus. On removing tumour from abdomen it was found to be adherent posteriorly and inferiorly on right side by a band resembling a second pedicle; this together with pedicle was divided by actual cautery, and wound closed in the usual way by silver sutures.

There was a little pain in right iliac fossa for first two days; on fourth day had fish dinner; two stitches removed the third day; all sutures removed by sixth day; was outside the bed on the eighteenth, and left the home on the twenty-sixth day perfectly well.

Case 3.—*Multilocular ovarian dropsy of one year's duration; ovariotomy; recovery.*

(Abridged from notes by Dr. BANTOCK.)

Mrs. M—, æt. 45. During great part of life has felt great pain and fluttering in lower part of abdomen; in May or June 1864 had severe attack of jaundice for six weeks; there was then no trace of tumour. In October 1864 noticed a swelling of abdomen; pain, or rather uneasiness, aggravated by exertion or long sitting; swelling gradually increased, dyspepsia and emaciation appeared.

Mr. B. Brown, on October 16th, proceeded to operate, in the presence of Mr. Ernest Hart, Mr. Harper, Dr. Sansom, and Dr. Bantock. Chloroform being administered by Dr. Sansom, Mr. Brown made an incision seven inches long down to peritoneum, trocar was then thrust in and about seven or eight quarts of ascitic fluid evacuated. The cavity was then opened, and a genuine multilocular cyst of left ovary, weighing about four pounds, was drawn out (about three pints of fluid being removed first); there

were no adhesions; pedicle was treated by cautery in usual way; ligature to artery in incision, and wound closed by twelve points of silver wire suture.

Two grains of solid opium when in bed per rectum, poultice on account of soreness; ice and toast water till about five next evening, when some toast with tea was allowed. This patient recovered without a bad symptom.

Case 4.—*Multilocular ovarian Dropsy of six years' duration; ovariotomy; recovery.*

(Abridged from notes by Dr. BANTOCK.)

Mrs. W—, æt. 40; married twenty years; no children; menstruation commenced at eleven, and has continued regular with one or two exceptions; quantity normal. About ten years of age first felt pain in right groin. Six years ago was told by Dr. Blyth of Dublin that there was enlargement of abdomen; soon after suffered great pain and tenderness (said to be of right ovary), after the voyage over to America. Three years ago had umbilical hernia removed by elastic bandage. In February last Dr. Blyth discovered a tumour, and recommended her to see Mr. B. Brown; tumour has increased rapidly during last nine months. On examination multilocular ovarian tumour; no adhesions; no ascites was diagnosed.

Chloroform being administered by Dr. Sansom, Mr. B. Brown proceeded to operate in the presence of Messrs. E. Hart, Harper, and Dr. Bantock. An incision was made four inches long, and subsequently extended two inches upwards (just beyond umbilicus). On opening peritoneum, the omentum (well supplied with fat) was found lying over the tumour, and could not be raised because of attachment to peritoneum below; an opening was therefore made through it, carefully avoiding any large vessel; the tumour was punctured, and over two pints of coffee-ground fluid were withdrawn from two of the cysts; the mass was then drawn through, and a very small pedicle divided by cautery; clamp allowed to remain on whilst several sutures were applied, when it was

removed, and the wound entirely closed. Chloroform with ether was given during latter half of the operation.

Early feeding was found necessary; beef tea on next day; no sickness except twice, and then because of non-absorption of fluids taken; on third day had a mutton chop; began to menstruate, and continued for two days; on sixth day bladder was found irritable; urine scanty and albuminous. Tinct. Ferri et Quinæ, with Tinct. Hyoscyami, given at night; patient went on improving uninterruptedly; all the stitches were removed by ninth day; urine became more abundant, and gradually free from albumen; irritability of bladder quite disappeared; and on twenty-eighth day she left the house perfectly well.

Case 5.—*Multilocular ovarian tumour of two years' duration; ovariotomy; recovery.*

(Abridged from notes by Dr. GROSVENOR, House-Surgeon.)

Miss E. P—, æt. 33. Catamenia regular until five months ago, when they suddenly ceased. Enlargement of abdomen first observed two years ago, when a moderate-sized tumour was found in middle line, lower part; during the last three months this tumour has rapidly increased in size, with much pain in left lumbar region; naturally strong, her health has not suffered much, although she says she is losing flesh (sent to the "Home" by Dr. Nicholas Tyacke, Chichester Infirmary). Chloroform having been administered, an incision seven or eight inches long through the abdominal parietes exposed a multilocular ovarian tumour with recent adhesions over anterior surface opposed to peritoneum (of anterior abdominal wall); were broken down by hand; and tumour having been emptied of fifteen pints of gelatinous fluid, was drawn out; its pedicle attached to right side was divided by actual cautery, and wound closed by eleven silver sutures. A threatened attack of peritonitis was combated by leeches, turpentine, poultices, and a little calomel, followed by quinine to cinchonism. Sickness very troublesome for three days; stitches removed by ninth day;

an abscess which formed in the track of a suture, delayed her recovery. She, however, left the "Home" forty-one days after the operation, having been walking about for ten days previously.

CASE 6.—*Multilocular ovarian tumour of three years' duration; ovariotomy; recovery.*

(Abridged from notes by Dr. GROSVENOR, House-Surgeon.)

Mrs. M. C—, æt. 48; eleven children, youngest five years old. Three years ago first felt pain in left side: six months ago pain seized right side, and abdomen has rapidly increased, till now it measures forty-seven inches in circumference at umbilicus. On examination, a more or less globular tumour, exceedingly movable, is found in right side, surrounded by a very large quantity of ascitic fluid. Uterus measures about three inches, is freely movable, and apparently having no connection with the tumours.

Chloroform having been given, an incision, seven or eight inches long, was made through much fat down to the peritoneum, which was also divided, giving exit to several quarts of ascitic fluid, and exposing a multilocular tumour, ulcerated on its anterior aspect, and attached by several distinct adhesions to mesentery on right side of tumour, and having no connection with the pelvic organs. The tumour was punctured, and its attachments—one of them of long extent to a very fat mesentery—were divided by actual cautery. One bleeding vessel in mesentery was tied by silver ligature, and cut short off; after removal of excess of ascitic fluid by sponge and pressure, the wound was closed by silver sutures. It was evident that the cause of the bleeding in the vessel requiring ligature was the great quantity of fat which melted under the iron, and prevented the puckering of the seared edge.

This patient never had a bad symptom, did not have a grain of opium, had fish on third day, four sutures removed on fifth, and remainder on seventh day; a small abscess formed under the integuments, and burst into the wound on

the nineteenth day, yielding pus for over a week, gained strength rather slowly, and was outside the bed on the thirty-third day.

CASE 7.—*Multilocular ovarian tumour of one year's duration, tumour containing solid fat, hair, and bone; ovariotomy; recovery.*

(Abridged from notes by Dr. BANTOCK.)

Miss C—, æt. 30. Menstruation regular, rather abundant, particularly the last year or two, every three weeks and three days; never was very strong; always hysterical. First noticed enlargement of abdomen about twelve months ago. The increase was at first slow, but during last three months more rapid, and she suffered from sickness. Complains of uneasiness in lower part of back. Examined December 8th, 1865, by Mr. Brown, who punctured the abdomen as an aid to diagnosis. This was followed by a severe attack of peritonitis, which lasted for a week. Menstrual period being at hand, she was not operated on till January 9th. Present: Drs. Ridsdale, Luke, and Bantock, and Mr. Harper. Dr. Luke having given chloroform, Mr. Brown made an incision about five inches long; slight adhesions to mesentery broken down by hand, and an extensive thin band on right side, joining what may be called the pedicle proper, was treated by cautery, as also the pedicle. A flap of mesentery bleeding was compressed and seared; but this was ineffectual in preventing bleeding from a very large mesenteric artery, so that it and two others, afterwards disturbed, were ligatured with twine and silver respectively, the ligatures being cut off short. Weight of tumour, emptied of about three pints of contents, was one pound eleven ounces.

Cyst or tumour contained custard-like matter, solid fat, hair, bone, &c.

Sickness relieved by Acid. Hydrocyanicum and Subcarbonate of Bismuth; all stitches removed on sixth day.

21st.—Pus escapes from the wound near the top.

24th.—Escapes rather abundantly from several openings.

February 5th.—Complains a good deal of pain in neighbourhood of wound, which still discharges pus. Patient improved gradually from this time, was outside her bed on the 12th, and downstairs on the 21st.

CASE 8.—*Unilocular ovarian tumour of eighteen months' duration; ovariotomy; recovery.*

(Abridged from notes by Dr. GROSVENOR, House-Surgeon.)

E. S—, æt. 22, married eighteen months; one child at full time. First observed swelling in lower part of abdomen shortly previous to marriage; a month after her confinement had an attack of peritonitis, lasting a week; tumour did not increase during pregnancy, but at termination began to grow slowly; during last month more rapidly; menstruation regular, bowels constipated; dull pain in back for fifteen months; is in tolerably good health, and anxious for operation.

January 25th, 1866.—Whilst under the influence of chloroform an incision, six inches long, exposed a unilocular ovarian tumour, with slight parietal adhesions. A trocar thrust into the cyst gave exit to six pints of dark brown fluid, gelatinous looking. On withdrawing the cyst two strong bands of adhesion were brought into view, and divided by cautery; an adhesion to left ovary was then divided; and lastly, a peculiar-looking cyst, pear-shaped, with gelatinous contents, resembling apple jelly, and having a pedicle about six inches long and cord-like, springing from some part of the intestines, was divided by cautery.

Experienced a good deal of sickness from effects of chloroform, relieved by Acid. Hydrocyanic. and Oxalate of Cerium.

26th.—Aching pain in hip and right iliac fossa.

28th.—Slept well during night.

February 13th.—Abscess formed near lower part of wound, ceasing to discharge on 19th.

Left the Home perfectly well February 24th.

CASE 9.—*Multilocular ovarian tumour of three months' duration; ovariotomy; recovery.*

(Abridged from notes by Dr. GROSVENOR, House-Surgeon.)

Mrs. H. B—, æt. 40; two children, several miscarriages. Three months ago became irregular, and a sanguineous discharge from the vagina flowed for four consecutive weeks; at the end of this period she first felt pain in the groins on stooping, and soon afterwards first felt the tumour. During the last month the tumour has grown rapidly, accompanied with a dragging pain in left side, worse on moving.

Feb. 8th, 1866.—Chloroform being administered, an incision was made eight inches long, which gave exit to a pint or two of ascitic fluid, and exposed a multilocular tumour, the size of a full-grown fœtal head, which, after the breaking down of some slight adhesions in front, was found to be quite movable. After emptying it of about one and a half pints of coffee-ground fluid, its pedicle was divided by the actual cautery, and the wound closed by ten points of silver suture. Slightly troubled with sickness; Hydrarg. Chlorid. three grains, and Oxalate of Cerium given.

10th.—Sickness much better.

All the sutures removed by the eighth day.

15th.—A few superficial abscesses formed around points of suture.

24th.—At present date discharge has ceased and is going on well.

CASE 10.—*Multilocular ovarian tumour of thirteen months' duration; ovariotomy; recovery.*

(Abridged from notes by Dr. BANTOCK.)

Mrs. S. D—, æt. 53; has had three children, youngest eleven years old; perfectly regular up to December, 1864, when her menses ceased suddenly. She then began to enlarge, and thought she was again pregnant. At the end of nine months, still believing herself pregnant, and having felt as she thought the movements of a child, she accounted

for the non-termination of her pregnancy by a supposed error of calculation. Having gone three months over without any definite result, she consulted her medical adviser, Mr. John Harrison, of Chester. She had already kept an attendant up one night expecting the completion of her pregnancy, through the presence of what she regarded as labour pains. She would not submit to examination until three months afterwards, when Mr. Harrison diagnosed her condition. Soon after she came up to London and consulted Mr. Baker Brown. The abdomen on examination was found very large, measuring fifty-four inches in circumference at umbilicus, and presenting œdema of the integument between the umbilicus and pubis.

On Feb. 13th, in the presence of Drs. Routh, Tilt, and Bantock, and Messrs. John Harrison and Harper, chloroform being administered by Mr. Harrison, an incision was made by Mr. Baker Brown from the umbilicus downwards for about six inches; this being insufficient, it was extended upwards to the right of and above the umbilicus for three or four inches; the peritoneum being divided, a large multilocular ovarian cyst was exposed; the hand was passed round, breaking down almost universal adhesions to the peritoneum; a trochar was then introduced, and a large quantity of fluid, the consistence of castor oil, of a peculiar gray colour, drawn off. The tumour was then drawn out, there being no intestinal or omental adhesions, and a medium-sized but very short pedicle proceeding from the right side brought into view; the clamp was then applied, but not successfully, for the pedicle gave way in part through the strain put upon it while the tumour was being cut away. The clamp was then loosened, the stump held by a vulsellum forceps, and with some difficulty, owing to the proximity of the uterus to the right edge of the pedicle, the clamp was reapplied; the stump was then seared off in the usual manner. Attention was then drawn to the sites of adhesion; a layer of coagulum was found in each flank and iliac fossa; on removing these, innumerable bleeding points were exposed; a patch on each abdominal flap was

then seared, an excess of coagulum was observed on lower part of wound, which on examination was found to be caused by hæmorrhage from the cornu of the uterus; after failing to ligature the vessel which was bleeding so copiously, a needle was passed through the textures, partly embracing the cornu of the uterus, carrying a double ligature which was tied in two divisions; after ligaturing several vessels at extreme edge of pedicle, the wound was closed by twelve points of silver suture; the sutures were not cut off, anticipating the necessity of again opening the abdomen in consequence of hæmorrhage, which all dreaded.

At 5 p.m. complained of cold and faintness. A little hot tea given and hot blanket thrown over the chest.

14th.—Some green sickness. Calomel three grains, and Acid. Hydrocyanic. two minims (Scheele), in soda water every two hours.

17th.—Dined off fowl; tongue clean, pulse eighty-four, and of good strength.

All the sutures removed by the 19th; wound quite healed and is doing remarkably well.

28th.—Patient has been outside of bed for two or three days, and is really perfectly well.

CASE 11.—*Multilocular ovarian tumour of three years' duration; one tapping; ovariotomy; recovery.*

(Abridged from notes by Dr. GROSVENOR, House-Surgeon.)

Miss J. S—, æt. 27; regular in menstruation; tumour first perceived three years ago; has been gradually increasing since; was tapped twelve months ago, when twelve quarts of ascitic fluid came away; abdomen globular, thirty-seven inches in circumference at umbilicus; uterus free but retroverted.

Feb. 15th.—Chloroform being administered, an incision six inches in length was made along the mesial line in the usual manner. A multilocular tumour was brought into view; the trochar was introduced into the cyst, and nine and a half pints of a limpid straw-coloured fluid escaped;

the clamp was applied to a broad thin pedicle arising from the right ovary; the actual cautery was applied, and the wound closed by silver sutures in the usual manner.

Slightly hysterical and sick same evening. Hydrocyanic Acid and Bicarbonate of Soda given.

17th.—Slept a good deal.

19th.—Had a little fish for dinner; tongue much furred.

20th.—Slept well; had a mutton chop; all the sutures were removed by the fifth day.

28th.—At present date is progressing most satisfactorily, and as far as the operation is concerned is quite well.

Remarks.—It will be observed that in cases 6, 7, and 10, I was obliged to use ligatures, either of silver or of twine, in addition to the cautery, by which it will be seen that in certain cases the actual cautery is not alone sufficient; but it will also be noticed that in ordinary cases the division of the pedicle or adhesions will be best effected by the actual cautery. But here, again, it is of importance to have a properly made clamp, like the one presented; I repeat, *exactly* like this instrument, because I have tried two or three others slightly different (although made by the same maker), which have not answered. It is advisable also that the heated iron should not be made too hot; a simple red heat is best, so as not to hurry the process of separation; that is to say, to bruise the pedicle by cutting it off slowly, and afterwards great care must be taken not to disturb the stump.

In the second case in which I used the actual cautery, being anxious to ascertain that the vessels were perfectly safe, I rubbed one part of the edge with a towel very gently, when the crust, as it were, was broken, and a small vessel immediately bled, which necessitated tying.

After this experience I always handled the stump with the greatest gentleness, and allowed it to drop into its position by its own weight; and when I state that out of my last twenty-three cases of completed ovariotomy I have only had two deaths, I think it must appear evident (at all events I consider so) that this great success has arisen from the

advantage of the actual cautery. I may here observe that these twenty-three cases have not been selected, and it never has been my practice from the commencement of ovariotomy to select my cases.

I do not recollect more than two cases in which I refused to operate and advised delay; on the contrary, I have frequently operated on patients *in extremis*, believing that it is the conscientious duty of the surgeon to put self and self-interest entirely out of the question where there is the slightest hope of recovery by operation. In conclusion, I may observe, so confident am I of the benefits of the actual cautery, that if I were to select my cases, as some are reported to do, ovariotomy would rank as high in statistical results as any capital operation.

Mr. Baker Brown said, since that paper had been written a case had occurred in which he could not apply the actual cautery, and for this reason, the omentum was exceedingly fat. Now, in cases where the omentum is very fat, the actual cautery is only waste of time. It is better not to attempt to sear, because the omentum will not sear and pucker up, but very likely the fat will melt and blaze. When the pedicle is seared, the greatest care is requisite not to rub off the seared edges.

For the discussion on this paper see page 131.

CASE OF FIBRO-CYSTIC DISEASE OF UTERUS MISTAKEN FOR OVARIAN DISEASE. ATTEMPTED EXTIRPATION. FAILURE. DEATH BY RUPTURE OF A VESSEL WITHIN THE CYST.

By C. H. F. Routh, M.D.,

PHYSICIAN TO SAMARITAN FREE HOSPITAL; CONSULTING PHYSICIAN FOR DISEASES OF WOMEN TO NORTH LONDON CONSUMPTION HOSPITAL.

Mrs. A. G—, æt. 26, admitted into the Samaritan Hospital, under Dr. Routh, October 25th, 1865. Moderately tall; spare habit; complexion dark. By occupation a sempstress for several years; married five years, but has not been fortunate in her married life; her husband a sailor, often away. No children; a miscarriage. Was quite well in health up to seventeen months ago, when abdomen began to enlarge. She was quite regular, and never had suffered from unusually copious catamenia. About five or six months ago the abdomen increased much more rapidly, and became more irregular in shape. Walking became also extremely troublesome, so that after a quarter of an hour or ten minutes she was obliged to sit down from the pain and uneasiness experienced. She was also quite incapacitated from doing her usual work. Was last unwell a few days since, naturally.

Abdominal examination.—The abdomen is very much enlarged, and very irregular in appearance. Both lumbar regions project in front, particularly left; while the umbilical is depressed. The umbilicus itself is rather sunken in. The tumour extends on both sides quite up to the ribs, and fills both iliac and hypogastric regions. The posterior lumbar regions on both sides are clear on percussion. Everywhere there is dulness. Fluctuation can be felt distinctly in both anterior lumbar regions on deep pressure; partly on superficial pressure only; but the fluctuation from one side is not conveyed to the other side. These two fluctuat-

ing sacs appear to unite near the umbilical region, but extending more towards right side, by a bridge of hard, resisting matter, in which no fluctuation can be traced; no souffle is heard over it; there is simply a transmission of cardiac sounds through it. The whole mass is freely movable on both sides, particularly on right.

Vaginal examination.—The vagina is not very large, but long. The os can be reached with difficulty, and is found to lie behind the growth, and to right side. It is small, but the sound penetrates to the normal distance, and to the right side. There is but little mobility of the uterus, but no movement is conveyed from the tumour to it. The whole cavity of pelvis is occupied by an indurated mass, more movable on right side than on left. On the right, movement of tumour from abdomen above is felt distinctly on the finger in the vagina, but on the left side to a considerably less degree.

The diagnosis I arrived at in this case was, multilocular disease of ovary, probably of left side. According, however, to a rule at the time in existence at the hospital, I had the benefit of the opinions of three of my colleagues. I must say, owing to the hard bridge of union between the two larger cysts, the idea of fibro-cystic uterine disease did occur to me, but I set it aside when I found the uterus was movable and of normal length. Dr. Rogers had the same suspicion, but, being unable to make a vaginal examination from accidental circumstances, could not speak certainly. A slight variance in the opinions given is doubtless due to a slight modification in symptoms, as described by the patient herself to the several medical men; for instance, as to her walking powers, &c. The opinions are, however, sufficiently different to justify their being recorded in full. I wrote mine as follows:—The patient, Mrs. E—, I believe to have multilocular ovarian disease. The uterus is *free*, but pushed behind and to right side. There is one point of difficulty in relation to the nature of the connexion between the two larger sacs. This bridge is intensely hard, almost solid. I think an exploratory incision would be advisable.

Dr. Savage's opinion was as follows:—"I think the thin tumours perceptible to the touch are thin portions of an ovarian tumour. I find no sign of adhesion. Whether or no the close attachment of the lowest part of the disease to the uterus be a true adhesion, I cannot determine. I incline to think not. I recommend an immediate operation, having due regard that the early incisions be considered exploratory."

Dr. Greenhalgh wrote:—"Ann E— is the subject of multilocular ovarian disease, of seventeen months' development. There is one large cyst to the right of abdomen, the remainder of the growth being chiefly made up of a large amount of solid tissue. The tumour extends into the anterior boundary of the pelvis, where it appears firmly fixed, the uterus healthy, being driven posteriorly and fixed. I do not think there are any abdominal adhesions. Tapping would be of little or no use in this case, but she is in very good health, and not at all inconvenienced by the growth; and as the case is unfavorable for operation, I should recommend ovariotomy at a more fitting time."

Sir Wm. Fergusson was of opinion "that the tumour in the abdomen was connected with the right ovary, and was of a solid character generally, with some cysts here and there. There are adhesions, but these, I imagine, cannot be very strong, and there is obscurity as to the relations of the back part of the mass. I see no objections to an explanatory incision, and possibly the tumour might be readily removed; but before any surgical interference it is needful that the patient should be made fully aware of the hazard incurred."

Very little was done for the patient during her stay in the hospital prior to the operation. A slight cough called simply for an expectorant mixture, and a slight purge completed the treatment.

On the 16th of November I performed the operation, assisted by my colleagues, Drs. Savage and Rogers, and by Mr. I. B. Brown. There were also present—Drs. Murray, West Indies; Bowen, Althaus, and Timms; and Messrs.

J. Robinson and R. Taylor. The patient being under the influence of chloroform, I commenced by making an incision along the median line, from the umbilicus to about two inches above the pubis. A small quantity of serum escaped, and the tumour came into view anteriorly. The hand was now passed into the abdominal cavity; the adhesions were slight, and the tumour was found very movable on the right side, but very little so on the left side. The incision being now enlarged to about two inches above umbilicus, two thirds of the tumour could be pulled out. On trying, however, to pull it outwards on left side, I could not. I now tapped the cyst on right side, and about two or three ounces of pus came away. The tumour being somewhat diminished in size, I made a second attempt to break down the attachments on left side, but failed. Mr. Brown also, at my request, inserted his hand, but likewise failed. I now completely emptied the open cyst of the matter contained, and which was purulent to the last, and closed the aperture in it by transfixing and a double ligature. There was very little oozing after the operation. Two portions of the mesentery, which were bleeding (one about six inches long, and one about four), were now cut through by the actual cautery, and replaced, the wound brought together by wire sutures, and the patient put to bed. There was a good deal of collapse, but the patient was surrounded by india-rubber warm-water bags. She was very sick, but was given a little brandy and ice.

About 6 p.m. she had rallied, and stated she felt pretty comfortable. Pulse 100, full; sickness continued; skin moist; tongue clean.

November 17th, 9 a.m.—The pulse is about 110, not so strong; feels very sore. I learnt that at 4 a.m., after a paroxysm of severe sickness, a quantity of bloody serum exuded from the lower part of wound, and produced some faintness. Cannot keep anything on her stomach; very thirsty and very sick. Ordered Acid. Hydrocyan. two minims, omne hora, in ice-water. The pulse gradually rose in the course of the day to 140, small; aspect very pale;

no more escape of serum from the wound; sickness a little less frequent.

In the evening the signs of sinking were more evident; she was getting rather violent, and got up several times to jump out of bed. When spoken to, however, she was at once quieted, and answered rationally. After one of her attempts to get out of bed, a quantity of bloody serum came away from the wound inferiorly. The state of the stomach precluded the use of any support being given by the mouth. Laudanum was, however, injected in twenty-drop doses twice per anum. Subsequently, about half a tumbler of beef-tea, with a few drops of laudanum every two or three hours in half-tumblers full. When the delirium cum tremore appeared, Tinc. Cantharides was administered; this checked all sickness. She gradually got worse, and sank at a quarter to 12 p.m. on November 18th.

Post-mortem examination, November 20th, 9½ a.m.—Communicated by Dr. Barratt.—Body fairly nourished; no decomposition. An incision in the median line of abdomen from about one inch above umbilicus to two inches above pubis; closed by silver wire; six inch cutting through the sutures; no union of cut edges was observable. In the cavity of abdomen, a collapsed cyst holding some ten or twelve ounces, and closed at one spot by a ligature, is apparent next the charred edges of great omentum, perfectly free from any trace of blood. Five to six ounces of blood and serosity escaped from the general cavity. The punctured cyst holds about four ounces of fluid blood freshly poured out. Several cysts united together are arranged around the fundus, sides, and first wall of uterus, which lies imbedded amongst them. It is pale and enlarged, especially the left cornu. The right cyst holds about five or six ounces of pure blood, fresh; the others pus, or a mixture of both. Large coagula; strong bands as trabeculæ of fibrous tissue cross the area of cysts, being a support for several large veins.

A very varicose condition of veins appears on the walls of cysts, almost amounting to plexuses.

The ovaries are so lost in the mass as not to be made out.

The adhesions are next to nothing; but the pelvic ligaments by long traction are converted into large and powerful cords. The uterus, as shown by two oblique incisions from os to cervix, is healthy in its lining, elongated about quarter of an inch beyond natural size, and exhibits *fibroma* of left side, with the effect of thickening the walls to two inches or more. The cavity does not communicate with cysts; but on a median incision being carried through the body of the uterus and the cysts at the fundus, it is clear that the nearest ones there attached are interstitially united with the substance of the uterus, and that they have sprung from the same source in the parietes of the uterus.

The cyst originally tapped at the operation was found, as before said, full of pus. This was emptied at the time; now it is found full of fresh blood. The source of the hæmorrhage appears to be from a varicose vein on the surface, about two inches above the aperture originally made with the trocar. The peritoneal surface at this point is peculiar; blood had been effused beneath the peritoneal coat, and extended some way beneath it; in the centre is a slight rupture, through which some of the blood had passed into the peritoneal cavity; as probably from an internal rupture it had filled the cyst. The larger cyst on the left side, which was not opened during the operation, now, from a vertical incision made through the tumour, appears also during life to have contained pus, a layer of this fluid floating on the blood when not thoroughly mixed with it.

The veins and vessels generally, on the portions of mesentery which were burnt off by the actual cautery during life, are very large, some of the size of the little finger. About four inches in length was left of one portion, and two and a half of the second. Now the portions of mesentery resemble more pieces of wet parchment than anything else. The length of the first had contracted to two inches; the second appears to be sessile on the

stomach. These burnt edges were examined carefully by my friend Dr. Bowen, late of the Coldstream Guards. He writes me:—"The vessels are unusually large; they are plugged up securely with clots for one half to three quarters of an inch, and there was certainly no hæmorrhage. The specimens are too decomposed for production."

There was no trace of inflammation except in the peritoneal surface of liver, which was quite opaque.

Remarks.—This case presents several points of interest. First, as to diagnosis. All those who examined it failed to recognise that the organ affected was the uterus; all stated it to be multilocular disease of the ovary. This is not to be wondered at, as the usual elements of differential diagnosis between these tumours and ovarian were absent.

1. *No early history of fibroid disease was known.*—In a case lately published by Mr. Holmes, and read before the Pathological Society, we may find many points of resemblance to this. No one, I imagine, seeing his patient at the stage of the disease to which she had attained, could have made a more accurate diagnosis. Mr. Wells had seen the case at an earlier period, and had therefore made out fibrous tumours. In my case no observer that I heard of had been as fortunately circumstanced.

2. *Flooding.*—It is generally believed that menorrhagia, by its comparative frequency in fibroids and rarity in ovarian disease, affords a diagnostic symptom. Out of 48 cases of fibroids, it was present in 34, or 70 per cent.; whereas in 150 cases of ovarian tumour, in 14, or 9 per cent. only, was there menorrhagia. The menorrhagia, however, with fibrocystic disease is, I believe, not so common as in ordinary fibroids. Thus, out of 18 cases of which I have the particulars, in 7 the existence of menorrhagia is not noted, a circumstance in itself negativing the supposition that it existed. In 3 the menorrhagia was well marked; in one of these, however, it followed on a miscarriage. In 1 menstruation had never occurred, although the patient was 36; in 1, aged 44, the catamenia had stopped for six months; in another of the same age it had ceased at 38. The others

were regular; in two, at least, of the menorrhagia cases there were fibroid growths protruding within the uterine cavity. Indeed, it appears, upon the whole, that fibrocystic growths, being as a rule extra-uterine, partake of the character of *extra-uterine* fibroids, and with these generally menorrhagia is absent.

3. (*a*) *Increased length of uterine cavity, and* (*b*) *independent mobility of organ.*—The uterine cavity is generally supposed to be lengthened in fibroid disease. In this case the sound penetrated the normal distance only. This, of course, favoured the supposition of the existence of ovarian, and not of fibrocystic, disease. That this opinion is, however, founded on a misconception I am assured, because the greatest length of uterus I have met with occurred in two cases of ovarian disease—in one upon which I operated, where the cavity was six inches long; in another where a woman died from apoplexy of the cyst before operation, in which the uterus was rather longer.

(*c*) *The independent mobility of the uterus* is considered as evidence, in a doubtful case, of the existence of ovarian disease. Now, it is very remarkable how, in examinations made as to this point, opinions will be found to differ. I had made out in this case the uterus to be free, but pushed behind. Dr. Savage, without expressing a doubt, concluded it was not bound down by adhesions. Dr. Greenhalgh believed the uterus *fixed,* although healthy. The post-mortem examination in a measure explained these incongruities. The uterus was perfectly free on the right side, and could be lifted easily out of the pelvis on this side. The movements on the left side were possible, although to a limited degree; due not to adhesions, but to the increased tenacity and strength of the ordinary uterine ligaments on that side. In a recent case which occurred at the London Surgical Home, and which, by the courtesy of Mr. Brown, I was allowed to examine, the same difference was noted by different observers. The successful operation proved that the uterus was free. Here in both examples the observers were men fully conversant with such cases. I believe the secret

of successful diagnosis in these cases lies in placing the woman on all fours, when practicable, if any doubt exist, and attempting, as it were, to turn the uterus with the sound *quite round.* The relation of parts in this position allows of the independent mobility of the uterus, if it be really free, which is sometimes impossible to make out when the patient is on her side or back; if it be fixed anywhere there the motion of the sound is checked.

4. *In fibrocystic disease we generally hear the tubular souffle in some parts of the tumour, and the cardiac sounds transmitted through it.*—In this case the first was absent, this absence again favouring the idea of ovarian disease. The double cardiac sound was heard in one part of it, and this proved that the tumour was in part solid. In the absence of other signs, this was not conclusive evidence of its being fibroid; a solid ovarian tumour would have given rise to the same symptoms.

5. *The microscopical evidence of contents was not made.*—In fibrocystic disease these may often be advantageously drawn by a capillary trocar, and examined under the microscope. The existence of fibrillæ will often then prove the fibroid character of the growth; but here the purulent and bloody character of the discharge would have rendered such an investigation negative.

Thus far for the diagnosis. Three other points require remark.

1. *The cause of death.*—This was rupture of the varicose vessels within the cavity of the cysts, possibly produced by the excessive vomiting present, in part due to the chloroform, and which persisted, with but slight intermission, to within two hours before death. The risk incurred in tapping such a case is also at once obvious. The trocar might have cut through or wounded a trabecula supporting a vessel, and thus have caused death. Such an accident did once occur to me, and so far, I believe, it is a unique case on record. In tapping a woman affected with ascites in the usual position, on the linea alba, when a quantity of ascitic fluid had flowed, at last only pure blood came away; the wound was

secured with a large needle, but she gradually sank, with symptoms of internal bleeding. The post-mortem examination revealed the cause. The trocar had passed through a subperitoneal varicose vein, from which the patient bled internally to death. Whether this did occur in the cyst tapped during this operation, or not, does not appear certainly, but the condition of the peritoneal surface of it before described militates against it. Moreover, in the other cysts, which did not communicate with it, blood was also found.

2. The efficacy of the actual cautery here is most clearly demonstrated. Spite of the sickness, not a drop of blood exuded from these surfaces. I am aware that in some recent publications the actual cautery is said to have failed. This, however, I believe due to its misapplication. If it be applied after the manner of Mr. I. B. Brown, I scarcely see how it can fail. So soon as the cautery has effected the separation it should be gently replaced into the abdominal cavity, and there left. If it be previously rubbed on the cauterized surface by a coarse towel, the charred surfaces are removed, and bleeding *must* recur.

3. The last consideration refers to the propriety of the operation. Dr. Greenhalgh alone discountenanced it, on the score of the apparent fixity of the uterus on the left side. The post-mortem proved that even here there was some degree of mobility, while on the right side it was quite movable. Provided the hazardous nature of the operation were made known to the patient, Sir W. Fergusson recommended the attempt at removal, Dr. Savage its immediate execution. The patient was informed, and Dr. Greenhalgh's very unfavorable view of her case explained to her, and she still prayed that it might be performed. More especially as it has been said in the journals that the cases of ovariotomy at the Samaritan Hospital are selected, I was anxious to disprove this, and not show the white feather. How far I was justified in so doing, I must leave the Society to determine.

Mr. Spencer Wells said he fully admitted that in some rare

cases it was very difficult, perhaps impossible, to arrive at an exact or positive diagnosis as to the nature of an abdominal tumour; but he contended that in the great majority of cases—in at least nine out of ten—it was quite possible to arrive near the truth in this as in any other department of surgery. Long ago, when the opponents of ovariotomy brought forward occasional mistakes in diagnosis as grounds for condemning the principle of the operation altogether, he (Mr. Wells) argued that mistakes must always be expected from time to time in the practice of a conjectural art. A surgeon about to perform lithotomy might find a stone larger or smaller than he expected, or no stone at all; or he might tie an artery to cure a supposed aneurism which proved to be a malignant tumour. But such rare errors should lead to care and caution to escape avoidable mistakes, and not to the dangerous doctrine that accurate diagnosis is impossible. He admitted most fully that men of great experience, after carefully examining a case, would sometimes find it impossible, even with the help of an exploratory incision, to make a positive and complete diagnosis. The men who boasted that they never made mistakes were either rogues who concealed their blunders, or fools who did not know when they went wrong, or men who never had anything to do. In such a case as that narrated by Dr. Routh, the exact nature of a tumour might be doubtful even after its removal. In one case recorded in his (Mr. Wells's) volume on diseases of the ovaries, even when the tumour was on the table at the Pathological Society, it was difficult to convince some of the members that it was uterine and not ovarian. But such cases were few and far between, and by no means opposed to the rule that in a large majority of cases of ovarian and uterine disease a very accurate diagnosis might be made. With regard to the use of the cautery in ovariotomy, the cases brought forward certainly proved that we had been taught an additional and successful mode of dealing with the pedicle. But they also convinced him that it should be an exceptional and not a general method. The number of cases in which ligatures had been also required, the accounts of melting and flaming fat, the care required as to the precise temperature of the irons, the slowness of the searing, the effects of disturbing the eschar, and the very frequent suppuration in the abdominal wall were very unsatisfactory. And the argument that because out of twenty completed cases only two had died, therefore this success was due to the use of the cautery was clearly untenable; for it was a curious fact that of the last twenty-two cases of ovariotomy in which he (Mr. Wells) had been able to secure the pedicle by a clamp, only two had died, and one of these lived twelve days and died of cancer of the peritoneum, which was not detected before the operation. Success in ovariotomy did not depend upon any particular routine in any one step of the operation, but upon all the steps of the operation being well done by

experienced men in properly selected cases. By this he did not mean that unfavorable cases were to be rejected. Far from it. If a patient were dying, and there were any reasonable prospects of saving her, and she was willing to run a great risk, it became a duty to try and save her life. Only that day he had operated upon a patient in the last stage of hectic fever from a suppurating cyst with a pulse of 140, and with scarcely a hope of success—because there was just a chance with the operation, and none whatever without. But to say that there should be no selection of cases, and that a surgeon should do ovariotomy upon every patient with ovarian disease who came before him, was simply idiotic. As reasonable beings, we must refuse to do a dangerous operation when the disease, on the one hand, is one which does not threaten life, and, on the other, when it is of such a nature that the operation would be almost necessarily fatal.

Mr. Baker Brown had seen the case described in Dr. Routh's paper. With respect to the different opinions recorded, he would say that it is impossible exactly to define the precise nature of any tumour before you actually cut down upon it; but, on this account, let no one be disheartened, for from his experience a diagnosis might be formed sufficiently accurate on which to base a successful operation.

April 4th, 1866.

Dr. Robert Barnes, President, in the Chair.

Present—48 Fellows and 8 visitors.

The following gentlemen were elected Fellows:—Drs. J. Carless, Woolwich; Astley Cooper, Wilton; Horniblow, Leamington; Sheraton, Ledgefield, Durham; T. J. Walker, Peterborough; A. Wiltshire, 100, Hampstead Road; and John Wilkins, William's Town, Victoria; and Messrs. A. J. Low, Gloucester Terrace; and R. Roberts, Port Madoc.

Dr. Gervis exhibited a rare form of monstrosity, in which there was a fusion of the two orbits into one; the mouth absent; the nose represented by a small, movable, cylindrical trunk placed above the central orbit, and the ears were situated beneath the horizontal rami of the lower maxilla. The specimen had occurred in the practice of Dr. W. Llewellyn, and the delivery was natural.

Dr. Meadows exhibited a new intra-uterine stem, which he had had made. He observed that he had frequently experienced difficulties in using the various intra-uterine stems which were made of metal and ebony. He had noticed in some cases that, after these stems had been worn for a day or so, they became coated with calcareous concretions; thus showing that some little irritation had been

caused by them; these concretions were offensive to the uterus, and often caused a good deal of local disturbance. The glass stem which he had had made would not be open to these objections; it was the most unirritating material possible. A similar one to that he exhibited had been borne by a patient of his three days without the slightest inconvenience, whereas the ebony and metal stems could not be tolerated even for a few hours. His stem was made of solid glass, about the size of No. 6 catheter, having a round flat disc at its vaginal end the size of a sixpence, and the only objection that could be raised to it was its liability to break; but this he believed was really no objection, for a stem of solid glass like that would be difficult to break, and, moreover, when once in the uterus, there is little or no opportunity of breaking it. He had had it made solid instead of tubular, not only because it was thereby stronger, but because to have it hollow would, in his opinion, be useless, as it certainly would not allow the escape of fluid from the interior of the uterus, for the fluid would have to run up to the fundus of the uterus in order to escape by the uterine stem, which occupied pretty nearly the entire length of that organ.

Dr. Routh asked Dr. Meadows if he intended to say that the stem touched the fundus uteri? If so he took exception to this or any other form of stem, for the fundus uteri was the most irritable portion of the uterus, and it was extremely undesirable that any uterine stem should come in contact with it.

Dr. Meadows said that Dr. Routh had understood him aright, as far, at least, as regards the possibility of the stem touching the fundus, though he did not pretend to say that it actually did always touch it; for his own part he could not see why Dr. Routh should take exception to a uterine stem touching the fundus, if it were allowed, as of course it must be, to touch the cervix. He thought the cervix was quite as irritable as the fundus.

Dr. Routh observed that Dr. Snow Beck had demonstrated that the fundus uteri was supplied by a different set of nerves, and that that set was more likely to be affected by irritation of the fundus uteri than any other part of that organ. He intended to bring a paper on this subject before the Society. There was a vast field

for investigation, and he had given the subject considerable attention, and was convinced that the fundus was much more irritable than Dr. Meadows was inclined to believe.

DISEASE OF THE PLACENTA.

By JOHN MARSHALL, Esq., Dover.

With Notes of an Examination of the specimen by Dr. GRAILY HEWITT.

THE patient from whom the specimen was obtained was a primipara; the labour was natural, and the child was born alive, but somewhat emaciated; the placenta was not adherent. The child died very suddenly forty-five hours after birth. I imagine it to be a case of fatty degeneration of the placenta.

NOTES OF AN EXAMINATION OF THE SPECIMEN. BY DR. GRAILY HEWITT.

The placenta is altogether smaller than natural; its shape is oval. The surface which was in contact with the uterus presents nothing very remarkable, the consistence and general appearance of the placental lobules being much as usual; the surface of the placenta, however, which looks towards the amnion has a dingy yellow colour, most marked towards the edge. The substance of the placenta is, over the whole of this surface, firm and hard, this firmness and hardness implicating the placenta over the whole of its amnionic surface to a depth which, at the outer margin of the placenta, is half an inch in thickness, but becomes less and less towards the centre of this surface, where the cord is attached. On section of the placenta the hardened yellow layer is seen to be abruptly separated from the

softer structure of the placenta, and the vessels from the cord are seen to pass through it. At the edge of the placenta the yellow opaque layer presents an appearance of concentric rings, apparently due to the fact that the placenta has undergone some degree of contraction in size during the formation of the layer in question.

The yellow opaque layer appears, under the microscope, to have no definite structure. It is harder in some parts than in others, but its texture is tolerably uniform. There is no evidence of fatty transformation except just at the edge where the parietal decidua joins it.

The divisions of the vessels passing off from the umbilical cord present a peculiar condition, inasmuch as, while two or three branches have the ordinary size, a certain number of them have the appearance only of delicate cords, and it would appear that the blood had circulated in the proper manner only through a few of the vessels, the remainder having become obliterated.

The appearance and condition of the placenta is compatible with the theory that the indurated yellowish layer is the result of effusion of lymph at a period probably two or three months antecedent to delivery; possibly the primary condition may have been effusion of blood beneath the amnionic covering of the placenta, the colouring portions of which have undergone absorption. At all events, the condition does not appear to be one of fatty degeneration in the ordinary sense of the word.

Accepting either of the proposed theories, the partial or complete obliteration of certain of the vessels of the placenta appears to be due to the effects of the presence of the effused material on the vessels of the cord, the primary divisions of which vessels the effused material would surround and envelope.

Dr. Graily Hewitt said that he had little more to say than he had communicated in the paper. The specimen showed little. In fact, the specimen does not represent what it should represent.

The thick yellow layer is evidently due to an effusion of blood. This is not a case of ordinary fatty degeneration of the placenta. The yellow layer has the appearance of syphilitic disease, but he had not any history of syphilis in the system of the patient.

Dr. BARNES had paid great attention to diseases of the placenta, and he differed from Dr. Graily Hewitt in his opinion of this case. He believed that it was neither a case of fatty nor fibrous degeneration, but one in which a quantity of fibrin had been thrown out from the blood-vessels. This fibrinous material is quite external to and independent of the chorionic villi. He did not believe that this state of things necessarily indicated the existence of syphilis, for it might occur quite independently of that condition. He believed that this yellow layer, which was not an uncommon appearance, was due to the fact that in pregnant women there is always an excess of fibrin in the blood. This appeared to him to be the true physiological explanation.

CASE OF CYST OF THE FALLOPIAN TUBE, WITH REMARKS.

By ALFRED MEADOWS, M.D., M.R.C.P.,

PHYSICIAN TO THE HOSPITAL FOR WOMEN, ETC. ETC.

THE following case came under my care as an in-patient at the Hospital for Women in Soho Square, and is, I think, of sufficient interest to merit a record in our 'Transactions.'

Mrs. G—, æt. 37, was admitted February 1st, 1866. She had been married fifteen years. Soon after marriage she became pregnant, but miscarried at the tenth week, and she subsequently, on different occasions, miscarried at the third, fourth, fourth and a half, fifth and a half, and seventh months; then she had a child at full term; then at the seventh and fifth months; and since then she has had six miscarriages at less than the second month. In all, she has been pregnant fifteen times, but only once went to full time. Menstruation began at fourteen, and continued regularly, though rather too frequent and generally profuse.

She has generally enjoyed very good health, but since June, 1865, she has suffered a good deal from back-ache, the pain extending through the uterine region and down the left leg; there has also been clotty menorrhagia during that time, accompanied by a good deal of pain.

On examination in the out-patient department there was found to be follicular inflammation of the cervix, with granular ulceration of the anterior lip and some fibroid deposit in the anterior wall of the uterus. The uterine cavity measured two and three quarter inches.

She was admitted as an in-patient, and on the 13th of February the catamenia appeared very freely.

On the 16th the discharge was profuse, notwithstanding some astringent medicine which was ordered. By a misunderstanding a cold astringent vaginal injection was given, which had the effect of reducing the amount of discharge.

On the 21st she complained of a good deal of abdominal pain, and pains about the pelvic region. The pulse went up to 120, small.

On the 22nd she was much worse; more pain; great tenderness on pressure over the uterus; but still she was cheerful; there was no sickness, no rigors; the tongue a good deal coated; pulse 120. She was ordered some saline draught and opium, and opiate cataplasms to the bowels.

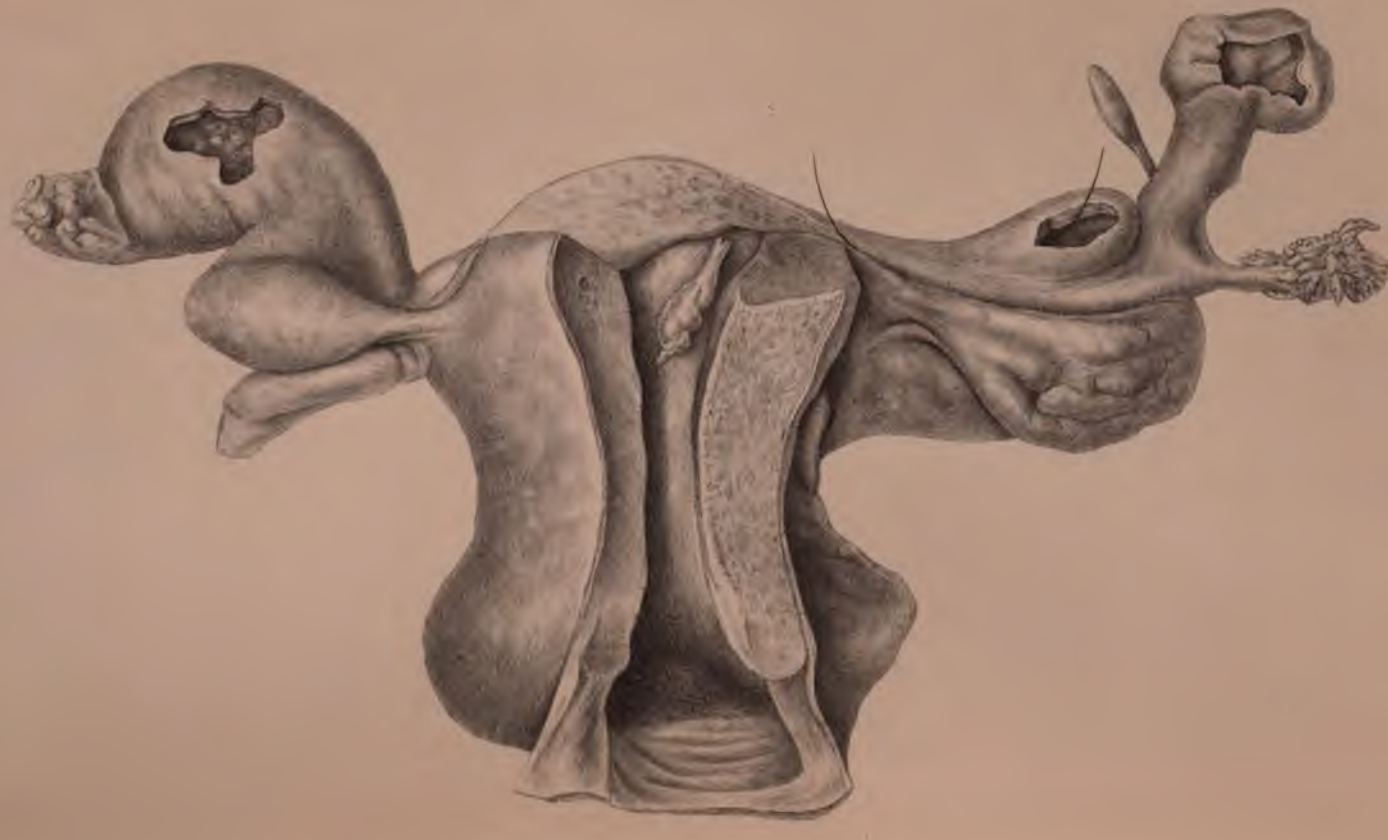
On the 23rd vomiting came on; the pulse very small and thready; the tongue coated; no diarrhœa; legs drawn up. On examination the uterus was very tender, especially in front; the vagina moist and not very hot. Ordered brandy, four ounces.

On the 24th she had more rigors; great difficulty of breathing; much general distress; pulse 108. Abdominal tympanitis.

On the 25th pulse 150; extremities cold; much abdominal distension; less pain.

She died at 3.25 p.m.

Post-mortem examination.—There was evidence of extensive peritoneal inflammation, which was most severely



marked in the pelvic region, where all the viscera were matted together, and a good deal of loose flaky lymph and pus was observed. The uterus and its appendages were all bound up together by thick and firm adhesions. On dissecting them out it was found that both Fallopian tubes were enlarged, not regularly or uniformly, but so as to form a kind of cyst. On the right side there were two such enlargements, on the other one. There was no evidence of any communication between these dilatations and the fimbriated opening. On the left side there was not even an opening into the uterus, the ostium uterium being completely occluded. They were all filled with a dark, thick, grumous fluid, of a prune-juice colour. The condition of the parts is very well seen in the annexed Plate.

Remarks.—It is evident that in this case we have an example of what MM. Bernutz and Goupil have contended for, viz., menstrual retention within the Fallopian tube. How long that fluid had been retained there, and what had been the cause of it, are questions which it is difficult, if not impossible, to answer. The one fact which is clearly revealed is, that the Fallopian tubes do, as well as the uterus, take part in the menstrual secretion, and hence, when any obstruction occurs to the passage of that secretion into the uterine cavity, and so externally, we get the resulting symptoms of menstrual retention, which may be severe or not according as the function is, from other sources, freely or scantily performed. Whether the peritonitis which proved fatal was, in this case, the result of the escape of some of the retained fluid into the peritoneal cavity or of reaction upon the peritoneum, it is also impossible to say; though it seems to me most probable that, with the existence of retention and consequent distension of the walls of the tubes, the employment of a cold douche at the time when a free discharge was taking place from those parts was the immediate exciting cause of an inflammation which probably would not have taken place had the parts generally been in a healthy condition.

Dr. GREENHALGH remarked that the case with which Dr. Meadows had favoured the Society fully illustrated what Dr. Savage had said with respect to uterine injections, viz., that we should always make sure there is a free opening in the cervix to allow of the ready escape of the injected fluid. He related the case of a patient for whom Dr. Savage injected the uterus at his own house. This brought on such severe pain that the lady could not be moved, and was laid up for some time at his house. He (Dr. Greenhalgh) insisted upon the necessity of making sure that the internal os uteri was freely open before attempting to inject the interior of the uterus.

Dr. MEADOWS rose to correct Dr. Greenhalgh by reminding him that in the case he had brought forward the injection was not made into the interior of the *uterus*, but into the *vagina*. The mischief arose, in his opinion, from the mere fact of injecting a cold fluid into the vagina at the time of the menstrual flow. But this probably would not have ended fatally but for the complications which were revealed after death in the generative organs.

ON MECHANICAL DYSMENORRHŒA.

By ROBERT GREENHALGH, M.D.,

PHYSICIAN-ACCOUCHEUR TO ST. BARTHOLOMEW'S HOSPITAL, AND LECTURER ON THE DISEASES OF WOMEN AND CHILDREN; CONSULTING PHYSICIAN TO THE CITY OF LONDON LYING-IN AND SAMARITAN HOSPITALS, ETC. ETC.

THE operation of division of the cervix uteri was first practised by Sir J. Simpson for the cure of obstructive dysmenorrhœa and sterility. As there can be no doubt that dysmenorrhœa arises from many and various causes, it is of the utmost importance that a correct diagnosis be formed, in order that appropriate treatment may be adopted, or much evil may be occasioned in this class of cases.

Dysmenorrhœa may be either congenital or induced, absolute or relative. It may be asked, Is it possible that a stricture can exist when the sound may be passed into the cavity of the uterus without difficulty? Of the fact there can be no doubt, in illustration of which I may state that, although the os uteri and canal of the cervix may be of

normal size, still a clot or polypus of larger dimensions may have to pass, rendering the parts relatively strictured. Having determined the case to be one of mechanical dysmenorrhœa, due to stricture of the external or internal os or canal of the cervix uteri, numerous mechanical means have been adopted for its removal. Various dilators, which produce temporary distension of the parts, are in favour with some practitioners; others prefer simple or expanding, metal or vulcanite stems, which are retained for a shorter or longer period; whereas a third use sponge tents, or the laminaria, which I have had perforated from end to end, to permit of the free escape of the secretions from the uterus during the process of dilatation; and, lastly, there are many practitioners who adopt division of the cervix uteri by means of Sir J. Simpson's or my metrotome, or by Drs. Barnes' or Sims' scissors.

I may here remark that strictures of the external os with conical cervix uteri have been extremely rare in my practice; the seat of stricture being, in the great majority of cases, at the internal os, which should be freely divided. I have never but in one case had to plug the vagina on account of hæmorrhage. In nearly all the cases in which I have operated, except in a few of relative stricture, I have been compelled to dilate the strictured parts, in order to permit the introduction of my metrotome.

I have now operated upon nearly 300 cases of mechanical dysmenorrhœa and sterility, with but few and slight casualties. One had rather profuse hæmorrhage, for which plugging was had recourse to; in about five others pelvic cellulitis ensued, a casualty which is by no means infrequent after the use of sponge tents; and in one peritonitis was set up, which terminated fatally. The case is as follows:

Mrs. B—, æt. 28; married nine years; never pregnant; has suffered, from her earliest menstrual period, from severe pains in and about the pelvis, of a paroxysmal character, for some hours before and during the catamenial flow. Her agony has become so severe of late as most seriously to affect her general health.

Every plan of treatment having failed, my opinion was sought by her medical attendant. On a careful investigation of the particulars of her case, I had no doubt that all her sufferings and damaged health were due to congenital obstruction of the os or cervix uteri.

A local examination revealed a conical cervix; small, round, external os uteri; uterus anteflexed, somewhat congested, and tender to the touch, and greatly constricted at internal os uteri.

On three occasions I tried to introduce a small sound through the internal os uteri, but failed in my endeavours.

The nature of the case being obvious, I proposed division of the internal os and cervix uteri, which was readily assented to. The patient being placed on her left side, I and Dr. Headley made several attempts to pass small instruments, firm and flexible, through the internal os, without success. She was now placed upon her back near the edge of the bed; a large speculum was passed into the vagina, and the cervix was hooked down by Sims' needle, which enabled me with great difficulty to pass, at first, a small bougie, then a dilator, and lastly my metrotome, with which I freely divided the parts; after which a dilating stem was introduced. These procedures occasioned but little pain, and but a slight amount of blood was lost.

For two days she progressed most satisfactorily, when vomiting set in, pain of a paroxysmal character, chiefly about the epigastrium, which she attributed to "wind," followed by febrile disturbance. In spite of the withdrawal of the stem from the uterus, and every means adopted, her symptoms continued with varying intensity till the ninth day after the operation, when she died.

Post-mortem, assisted by Dr. Skölberg.—Numerous old peritoneal adhesions, with recent effusion of lymph and serum; enlarged mesenteric glands, with tubercular deposits; the uterus, much anteverted, was bound down by old adhesions. On removing the uterus it was found to be somewhat above the normal size, and much congested. On

opening the uterus it was found that the metrotome had not cut through the internal os, which was much constricted. It was subsequently ascertained from her medical attendant that she had frequently had attacks of pain in the abdomen, with more or less febrile disturbance and obstinate constipation, which had been attributed to biliary derangement. Had I been aware of these attacks of tubercular peritonitis prior to the operation, I should have regarded the case as one wholly unfitted for any such procedure.

Formerly I was in the habit of dividing the cervix uteri with but few or no precautions, occasionally doing it in the out-patient department of the hospital and at my own house. Subsequent experience has convinced me that, although no evils ensue in the great majority of cases, still, every now and then much mischief has resulted. I now make it a rule first to improve, as far as possible, the patient's general and local conditions before I operate, and then to keep her two or more days in bed, under the surveillance of a good nurse, in the mean time ordering an appropriate diet.

I cannot conclude without alluding to the great danger of the introduction of the sponge tent after division of the cervix uteri. I know of one fatal case resulting from this practice, and I am confident many more will be added to the list if this course is pursued.

Dr. Barnes was of opinion that the danger consisted in cutting the os internum. In his experience very little danger was to be apprehended from incision of the os externum, but many fatal cases had arisen from incision of the os internum. Many of these cases might be relieved by dilatation of the cervix alone. He quite agreed with Dr. Greenhalgh in the imperative necessity of keeping the patient at home; he should not think of operating on a patient in his house, and after operation he should insist upon the patient keeping in bed at least three days. He would remind the Society that patients came to them to be relieved from what could not be considered a vital ailment. They, in the majority of cases, applied to them to be cured of their sterility, and if we are asked to adopt an operation that jeopardises the woman's life in order to remove the sterile condition we should do well to hesitate. It is a sad thing to see a woman die because she has undergone

an operation for sterility. He thought Dr. Greenhalgh's case would teach all a lesson and make them adopt every precaution, before they incise the internal os.

Dr. GREENHALGH referred to another case in which he had introduced a stem into the uterus for anteflexion of that organ; and though he had directed the lady to have it removed if she suffered any pain from it, she was so anxious to get cured of the anteflexion that she wore it contrary to his directions. Peritonitis came on, and Dr. Eastlake saw her in his absence. He would tell them that the case proved fatal, though there was no operation performed in this case.

Dr. EASTLAKE stated that the lady referred to by Dr. Greenhalgh was under the care of a homœopathic practitioner, and he (Dr. Eastlake) was merely called in to see her at the last. He found the uterine stem still in the uterus, and she was in extreme agony from it. He removed it at once and drew off the urine. He saw her three times after, but could not give any further information as to the cause of death, as she was under the care of her homœopathic adviser. He was called in to see her on account of her uterine disorder.

Dr. ROUTH was much obliged to Dr. Greenhalgh for bringing the case before the Society. He wished every Fellow would act as Dr. Greenhalgh had done, and bring their fatal cases before the profession. Unfortunately for the medical profession, and the public at large, medical men do not like to bring forward their unfortunate cases. Some years ago he thought this operation much less dangerous than he did now. He thought it an operation fraught with danger, and required the greatest possible care both before and after. This case was a most unfortunate one to operate on, because the opening into the uterus was so excessively small. He thought no woman could stand to be one and three-quarter hours under operation without suffering afterwards from it. Then, again, there was no loss of blood from the incision. That, in his opinion, was bad; he always liked them to lose three or four ounces. He did not think there was any danger in incising the internal os uteri when there was no inflammation of the fundus uteri. He would remind them that there are cases where the passing of a sound has proved fatal. The pulling down of the uterus has produced peritonitis. There are some uteri in that irritable condition that a simple examination will bring on peritonitis. They should inquire in every case, is this a fit one to operate on, and if not, what is the cause of these untoward symptoms?

Dr. GERVIS, with much diffidence, ventured to criticise any proceeding of so excellent an operator as Dr. Greenhalgh, but it did occur to him that this was one of those cases in which performing the operation by stages might have been the safer way. Dr. Gervis referred to a recent case in which he had found the

cervical canal so contracted that a catgut bougie could with difficulty be passed into the uterine cavity, but in which, by three successive operations at stated intervals, a complete cure had been safely effected, and the extreme dysmenorrhœa completely relieved. This mode of operating by stages Dr. Gervis had adopted in many other cases, and with much success.

Dr. HEAD asked Dr. Greenhalgh if he had examined the urine of the patient he had operated on. Was it albuminous?—and if so, was it expedient in a surgical point of view to perform the operation?

Dr. BALLS was present at the operation. The patient was quite comfortable during its performance, and did not complain of pain. The sound was introduced after some delay and with difficulty. The uterus was pulled down, but not so as to give pain; there was no pain when the abdominal walls were pressed. She had complained of pain in the region of the colon. She said she suffered from obstruction of the colon. On the post-mortem examination, the exterior of the uterus was found coated over with old-standing exudation, as was also the peritoneal cavity.

Dr. ROGERS agreed with Dr. Greenhalgh that there is need of the greatest care after these operations. He preferred incision of the os to the use of sponge-tents, and differed from Dr. Barnes in believing that incision of the os internum was frequently the seat of stricture. He added his testimony to the danger that sometimes attends incision of the cervix. He had lost one case through incision of the os internum.

Dr. RASCH never found a case where there was stricture of the internal os. He had examined a large number of cases, but never met with one where he was unable to pass a sound. Those cases that were said to be cases of stricture of the os internum he had diagnosed to be cases of flexion; and when this condition was recognised and remedied, it was not difficult to pass a sound. Anteflexion is the difficulty—not stricture of the os internum. He had passed the sound in between 3,000 and 4,000 cases.

Dr. ROGERS said that in flexions we might introduce the sound by bending it according to the flexion; but he had met with not a few cases where there was not any flexion, and yet it was impossible to introduce the sound; and, again, there were cases where the sound could only be passed at the menstrual period, owing to the slight dilatation induced by menstruation.

Dr. ROUTH had a case at the Samaritan Hospital of stricture of the internal os which he would be happy to show to Dr. Rasch, and he would be extremely obliged if he could introduce a sound into the uterus.

Mr. BAKER BROWN, jun., thanked his seniors for the warning he had received from the results of their practice. After carefully considering the cases operated on, he could not but think that more simple measures than operation would be beneficial.

Dr. MEADOWS remarked that in cases which come before us for operation it is very necessary to inquire as to what is the condition of the uterus and the appendages. He believed that in cases of stricture where the uterus was flexed, the danger was enormous. In many of these cases there is reason to believe that the flexed uterus is bound down by adhesions on its peritoneal surface; and it is most desirable to recognise this condition. Unfortunately, however, it is not always possible to say what is the condition of the uterine appendages, for the diagnosis is sometimes extremely difficult. With respect to the question of the difference between the irritability of the fundus and cervix uteri, which had been alluded to by Dr. Routh during the evening, he believed that it was not based upon pathological experience. Nor could he see that the fact of one branch of the splanchnic nerve supplying the fundus, and another the cervix, was any proof that the fundus is more susceptible of irritation than the cervix. He believed quite as much mischief arose from touching the cervix as from touching the fundus.

Dr. GREENHALGH, in replying to Dr. Routh, informed him that there was not any local inflammation in the case mentioned. The patient had been under treatment some little time before the operation. He had ordered her to take small doses of Bichloride of Mercury, Belladonna, and Quinine, and also to have warm douches repeatedly. In reply to Dr. Head—The urine had been examined, but there was not any trace of albumen; it was loaded with phosphates. The case was, in his opinion, a good one for operation, though the result was unfavorable. He had always made it a point to bring all his fatal cases before the Society, although he had said nothing about his successful ones. More was to be learned oftentimes from failure than from success. He had certainly obtained more information from unsuccessful operations than from successful ones. In this case there was tuberculous deposit with a chronic form of peritonitis, which was much against the operation. In reply to Dr. Rasch, that it was possible to introduce a sound into every uterus, he denied it *in toto*. In regard to division of the cervix, he had performed this operation on out-patients, and they had gone home afterwards. Some few had had bad symptoms, but the majority had done well. This case, however, would make him more cautious about the necessity of perfect rest after this operation. Still, he should certainly not be deterred from performing the operation by the fatal result of this case, nor by the opinions expressed by some of the Fellows.

Dr. BARNES notified to the Fellows that Madame Stahl, the daughter of Dr. Rigby, sen., the first President of the Society, had presented them with a bust of her father.

MAY 2nd, 1866.

Dr. ROBERT BARNES, President, in the Chair.

Present—51 Fellows and 11 visitors.

Professor Lazarewitch, of Charkoff, Russia, was elected an Honorary Fellow of the Society.

The following gentlemen were elected as Ordinary Fellows of the Society:—Dr. H. C. Andrews, Oakley Square; John Bassett, Esq., Birmingham; Thomas Blease, Esq., Altrincham; George D. Brown, Esq., Ealing; James Cornwall, Esq., Fairford, Gloucestershire; Dr. G. P. Rugg, Clapham Road Place; James Scott Sequeira, Esq., Leman Street, Goodman's Fields.

Dr. WILTSHIRE showed a new form of uterine tent, composed of sponge and laminaria, the sponge forming an outer casing to the laminaria, which was tubular.

Dr. BARNES exhibited a uterus with its appendages which were affected with colloid disease. He also showed a specimen, which he had received from Dr. Brunton, of abscess in the placenta. The abscess contained about an ounce of pus. There had been no symptoms of pain during gestation; but there had evidently been inflammation of the decidua. Dr. Barnes considered these cases very rare, and exceedingly interesting. He knew of but two or three on record, and they were described by French authors.

CASES OF LACERATION OF THE UTERUS, WITH REMARKS.

By Thomas Radford, M.D., &c., &c.
HON. CONSULTING PHYSICIAN TO ST. MARY'S HOSPITAL, MANCHESTER.

Laceration of the uterus is one of the most dangerous accidents which happen to women during labour, and is amongst the most appalling to the obstetrician. Most of our best practical writers were of opinion as to the great fatality of this injury; and until a certain period it was considered by physicians to be the safest and wisest course which could be pursued to leave the case to the efforts of nature—amongst whom we may enumerate the late Dr. Hunter, Dr. Denman, and others. Dr. Douglass first ventured to differ from the opinions then generally entertained, and the successful termination of his (Mrs. Manning's) case produced a wonderful revolution in the views then entertained as to the practice to be adopted in these dreadful accidents.

The great fatality of this accident induced Dr. Denman to change his opinions, in his 'Observations on Rupture of the Uterus,' published 1810, from those he had expressed in his 'Introduction to the Practice of Midwifery,' fourth edition, 1805.

This writer states that "every instance of the kind which has come within my knowledge, and the number has not been inconsiderable, have perished" (*i. e.* mother and child). 'Observations,' &c., p. 17.

As the opinions of Dr. Denman (who is deservedly esteemed an authority of the highest rank) are so contradictory in themselves on a subject of such great importance as the treatment to be adopted in cases of the rupture of the uterus, it is desirable to accumulate all the evidence upon the subject which can possibly be obtained. The relation, therefore, of fatal cases, and particularly where the bodies have been examined after death, by extending our

knowledge of the circumstances attending rupture, may lead to inferences equally important with those deduced from cases of successful termination.

Before the publication of the observations of Dr. Douglass, 1785, comparatively few cases were recorded; since that period a number of cases have been published. But yet it is to be feared the great bulk of the cases which have happened have not been brought to light. Every person candidly inquiring after truth must acknowledge that it is too much the practice to relate successful cases and to withhold those of a contrary termination. But in order to possess the means of averting this dreadful accident, it behoves every member of our profession to come forward and detail all the cases, whether successful or unsuccessful, which have or may occur to him; thus, ultimately, facts sufficiently numerous would be furnished, whence deductions might be made, and rules of practice formed.

CASE 1.—*Laceration of the uterus; arm and shoulder presentation; fatal.*

In June, 1820, I was requested by one of the hospital midwives to visit a poor woman residing in Back Bridgewater Street, who was in a very dangerous state. Upon my arrival I soon ascertained that this poor creature was in a very hopeless condition. Her countenance had assumed the Hippocratic aspect; her respiration was laborious, and sonorous from a heavy mucous rattle; her pulse could scarcely be felt, and was intermittent; her skin was bedewed with a cold sweat; her extremities were cold, and there was great abdominal tenderness. Upon a vaginal examination, I found that the infant was transversely placed; the arm protruded from the os externum, and the shoulder was very firmly wedged in the pelvis; the membranes had been ruptured for more than thirty-six hours, and the pains had been very violent during the whole of this time until four hours before my arrival, when they suddenly ceased. With these deathlike symptoms existing, I doubted the propriety of delivery, and therefore sent for Mr. W. Wood, my highly

valued partner and relative, to give me his opinion. He recommended me not to attempt delivery, and said he was convinced she would sink under the operation. He thought it imprudent to bring discredit upon any operation when there was no chance of saving the infant. She died before we left the house.

Remarks.—There are no comments to be made upon this case, except to urge the necessity of timely delivery in all those preternatural labours in which the infant must be turned. The neglect of the midwife cannot be too strongly condemned; but, in justice to our hospital, I must say that fatal cases from protracted labour are now comparatively rare.

CASE 2.—*Laceration of the cervix; fatal.*

Mrs. D—, æt. 40; very stout and of low stature; now pregnant of her eighth child. February 16th, 1823, at seven o'clock a.m., she began to experience slight labour-pains, which continued until eight o'clock, when my attendance was requested. I found her in every respect as well as possible. The pains were regular but short, and the membranes had ruptured about an hour before my visit; the os uteri was dilated to about the size of a dollar, and was thin and soft; the head of the infant was lying over the brim of the pelvis in a natural position. Up to twelve o'clock occasional examinations were made, from each of which I was assured that labour was gradually and naturally proceeding. The os uteri had gradually become developed, and about this hour its dilatation was completely effected. The head of the infant now descended rather rapidly, and in an hour afterwards was expelled. The pains during this time were energetic, and, indeed, were powerfully expulsatory. No sooner, however, had the head emerged than there was a complete suspension of uterine action—the pains entirely ceased. Friction was applied to the abdomen, but to no avail; the uterus was passively obedient to all the efforts which I made to rouse it into activity. As the infant was dead, I attempted its removal by placing a napkin round the neck; but although I was able to use powerful traction, I failed to make the

slightest advance. I felt unable to account for this delay, as there were no symptoms which indicated any unfavorable organic change in the condition of the mother; there was no evidence of any lesion in the uterus, &c. Her countenance was natural; her pulse good; her skin warm; and there was no vomiting. Mr. Wood being absent from home, I requested the attendance of my friend Mr. Jordan, who with great kindness came to my assistance. He considered the case extraordinary, and recommended further and persevering attempts to be made to deliver her. At length Mr. Wood, along with Mr. Tomlinson, a very experienced obstetrician, came, and, after a very careful investigation of the attendant circumstances, they were equally at a loss to account for the cause of the protraction. Powerful traction by means of the napkin round the infant's neck, and by the blunt hook placed in the axilla, was made for a long time before we succeeded in extracting the child, which proved to be immensely large. By an abdominal examination, the uterus was found regularly contracted; and by a vaginal examination I found the edge of the placenta. There was at this time no discharge, and in about a qnarter of an hour the placenta was expelled. I again repeated my abdominal and vaginal examinations, which fully assured me that all the changes which could be ascertained were those which exist after the most natural labour. A bandage was now applied round the body, and an opiate was administered. At my evening visit I found she had slept, and all my inquiries were most satisfactorily answered.

On the 17th, a.m., I found her very comfortable. She had slept; her pulse was 80; she had passed urine; her skin was cool, and her tongue was clean; her bowels were constipated; the lochial discharge was natural. Ordered Decoct. Aloe. Co., and a common enema. At evening I found the bowels had been opened, and in all other respects she appeared to be going on well.

Early in the morning of the 18th (being the day but one after her delivery), I was much surprised to find her so much

changed. During the night she had a very severe shivering, which was so violent as to shake the bed, and which continued a very long time, when it gradually subsided. It was succeeded by excessive heat, and shortly afterwards she was attacked by a violent pain in the abdomen, which was greatly aggravated by the pressure of the hand. The pulse was 130, and hard; her tongue was white and furred; she had great thirst; there was tumefaction as well as pain in the abdomen; she had passed urine, and her bowels had not been again moved. These symptoms forcibly indicated the serious character of the disease which had supervened, and which unmistakably required a decided antiphlogistic plan of treatment, which was forthwith rigidly pursued. General and local bleedings, purgatives, calomel and opium, cataplasms, and turpentine lotion, were the remedies adopted. She was bled three times in the arm—at the first visit to eighteen ounces; at the second visit, twelve ounces; at the third, ten ounces. The blood was drawn from a large orifice, and was found, after standing for some time, cupped and buffed on the surface.

On the 20th the symptoms had become seriously worse, and during the day became more and more unfavorable, until evening, when she expired.

Post-mortem examination.—The next evening (February 21st) the body was examined in the presence of Mr. Wood and Mr. Jordan. Upon making a longitudinal incision, and turning the parietes aside, a large quanity of bloody serum issued out. After a transverse division had been made and the flaps turned aside, the peritoneum was seen to be thickly coated with lymph. The convolutions of the bowels were strongly and universally agglutinated. Upon separating them, a quantity of bloody serum was found in the interstices, with flakes of lymph floating in it.

There was general peritonitis. The peritoneal coat of the uterus was very vascular, and thickly coated with lymph. Upon raising the uterus, we discovered three openings varying from the size of a shilling to that of half a crown, and about an inch distant from each other. These openings

were situated in the cervix, and were pervious from the peritoneal to the uterine cavity. The edges were ragged, and the surrounding texture was softened, and had an appearance as if the part had been beaten with some blunt instrument. There was no evidence of any gangrenous change.

The bladder was sound.

The pelvis was of a natural size, and free from any exostotic growths or sharp-edged projections.

The infant (a boy) was of an immense size, and weighed fully sixteen and a quarter pounds avoirdupois.

Remarks.—During the labour it was quite impossible to account for the suspended uterine action which took place, but the post-mortem examination unravelled the mystery. It was extraordinary and astonishing that so complete an immunity from any shock should have existed in all the organic functions of the body. The extraordinary constitutional tranquillity which existed, and likewise the total exemption in the uterus itself from the usual symptoms which indicate that some serious mischief had happened to it, were the circumstances which misled us in our opinion and kept us unacquainted with the real nature of the case. Nothing further occurred after the completion of the labour which could lead to such a conclusion. After the delivery of the infant, the placenta was spontaneously expelled. There was no hæmorrhage, and the uterus was found well contracted.

But the extraordinary size of the child is not alone sufficient to account for the accident. The character of the wounds and the condition of the surrounding texture prove that there must have been previous softening in the cervix uteri.

CASE 3.—*Oblique laceration of the muscular structure of the cervix uteri, the peritoneal coat being uninjured; fatal.*

On June 4th, 1824, I was requested by Mrs. Holden, midwife, to visit a poor woman residing in Water Street, London Road, who was represented as being in great danger. On my arrival I was much struck with the

cadaverous aspect of the patient, and at once endeavoured to ascertain the cause. I was informed that this was her fourth pregnancy, and that all her former labours were tedious, but terminated safely by the natural powers. She had been in labour about ten hours; the membranes ruptured in six hours after its commencement; the pains were stated to have come on at regular intervals, and were of a grinding character. The midwife became alarmed, as the patient was seized suddenly with a pain very different from those she had endured up to this time. She uttered a violent exclamation, "What a pain, the cramp in my belly! I shall die." She instantly became ghastly, and vomited, and the surface of her skin was bedewed with a cold sweat; the pains ceased, and her pulse was extremely weak and fluttering. I found the os uteri dilated to rather more than the size of a crown-piece; on the left side its structure was decidedly diseased, and of a schirrous hardness. I carefully examined the pelvis, but detected no deviation from the standard measurement. The head of the infant presented, and was in intimate contact with the os uteri, which position it maintained when the finger was pressed forcibly against it. I then placed my hand upon the abdomen, but I detected nothing different in the uterine tumour from what is usually observed at this period of labour. Although I could not discover any rupture of the uterus, yet I felt assured in my own mind that this was the case, and decided upon immediate delivery. The only mode of accomplishing this object was to open the infant's head; and as I had not the instruments necessary for this operation, I went to Mr. Wood, Downing Street, and requested the loan of them, which he kindly lent me, and he accompanied me to the case. The head was perforated, and then, by means of the crotchet, was extracted. During the time the poor woman was extremely faint, and required to have brandy frequently administered to her. I found the placenta lying loose over the os uteri, and removed it. There was not more blood lost than in ordinary cases of labour. I now introduced the hand into the vagina, passed the index finger through the

os uteri, and on the left side I detected a rupture of cervix. Some gruel with a little brandy was given, and one drachm of Tinct. Opii was administered.

The day following she was seized with shivering, which in the course of a short period was followed by violent reaction: the skin became intensely hot, and the pulse quick; her tongue was furred, and there was much abdominal pain, which was considerably increased by pressure; the bowels were constipated, and there was retention of urine.

The case was treated upon as active an antiphlogistic plan as existing circumstances demanded. General and local bleeding, purging calomel and opium, turpentine lotion, and poultices to the belly; enemata containing Sp. Terebinth.: these were the remedies adopted. The vital powers were feeble; she did not bear the general bleeding very well, and became faint after about ten ounces of blood were abstracted; she died on the third day after delivery.

Post-mortem examination.—Present, Mr. Wood and Mr. Ollier. The peritoneal coat of the intestines was much inflamed, and the convolutions were glued together with lymph; there was a quantity of serous fluid in the abdomen. The uterus was tolerably well contracted. There was no laceration to be seen from the abdominal cavity; but along the left side of the lower portion of the cervix uteri, and extending backwards, there existed the bluish-red colour of ecchymosis, which, upon a more minute examination, was found to extend into the iliac fossa, and upwards behind the peritoneum as high as the meso-colon. This arose from an effusion of blood, which must have amounted in quantity from a pound and a half to two pounds.

The uterus, with a large portion of the peritoneum and some of the intestine, were now removed by cutting through the vagina very low down.

The os uteri was very carefully examined, and fully half of it was found of a schirrous hardness. A little above it there was a laceration in the cervix, about two or three inches long, extending obliquely upwards, but only involving the muscular structure. The peritoneal coat was entire.

Remarks.—In this case there are several important points worthy of consideration. The infant remained undisturbed within the uterus, and consequently one cause of shock which usually occurs in such cases was absent. It therefore became difficult to account for the extremely collapsed condition of the patient at the time of my first seeing her. But the post-mortem examination clearly revealed the cause. The large amount of blood which was effused under the peritoneum, and which doubtless had been suddenly lost, accounts for her great vital depression, and explains also why the venesection was not well borne.

The rupture of the uterus was caused by the rigid schirrous condition of the os uteri. Most probably the fatal issue might have been averted if I had seen the patient before the accident had happened. The prophylactic treatment in such a case would be to endeavour to relax the os uteri by bleeding, &c.; and afterwards, if this desirable change was not effected, then incisions, in sufficient number and extent, should be made into the os uteri: after which, if the natural powers of the woman are found not to be equal to the delivery, then a question would arise whether the long forceps, turning, or craniotomy, should be had recourse to.

CASE 4.—*Anterior laceration of the uterus; fatal.*

I am unfortunately unable to give a very minute description of the following case, only brief notes having been obtained; yet there is connected with it a very instructive lesson. I am indebted to Mr. J. A. Ransome for the statements. His late father kindly lent me the pelvis which belonged to the poor woman who was the subject of this case, with the kind permission to have a cast made from it.

The woman was a patient of the Manchester Infirmary; she was twenty-one years of age, and unmarried; she was "deformed in every part:" the deformity, she stated, had commenced in childhood from rickets, and had continued to increase up to the present time; she was at the full

period of her first pregnancy. When Mr. J. A. Ransome first visited her, she was in strong labour; and, according to her statement, she had suffered strong pain for forty-eight hours. The membranes had spontaneously broken for some hours before he saw her. He says—"Upon attempting to examine her, I discovered a degree of narrowness which (being the first case of labour I had ever attended) completely puzzled me;" and therefore he obtained the assistance of a more experienced pupil. This gentleman, in his examination, encountered the same difficulties. Mr. J. A. Ransome, therefore, applied to his father, who, on seeing her, at once discovered the serious character of the case, and without delay desired a consultation with the other surgeons of the institution. Most of these medical officers attended, and concluded to have another meeting, at which some of the medical officers of the Lying-in Hospital were invited to be present. At this time the pains occurred at regular intervals, and she was far more comfortable and less exhausted than could be reasonably expected.

The performance of the Cæsarean section was proposed; but unfortunately this procedure was opposed, and in fact overruled by a majority. These parties founded their objections on the probability of the death of the infant, and on the imminent danger of this operation to the mother; and not only so, but they confidently entertained an opinion of the possibility of delivery "per vias naturales," if the cranial bones were removed. With this conviction, the head of the infant was perforated, and portions of bone successively removed. The crotchet was then firmly fixed, and powerful traction made and continued, until at last "there remained no point of traction;" which doubtless means, no hold could be maintained. Thus failing, it was agreed "to trust to the natural powers during the remainder of the night." In the morning no progress had been made, although the pains had continued unabated. Further attempts were again unsuccessfully made to bring down the head with the crotchet. Under these circumstances, the necessity of performing the Cæsarean section was a second

time proposed, and again obstinately opposed. In the evening the case of this poor creature was considered hopeless, and therefore no further attempts were made to deliver her. An opiate was administered. She continued to suffer pains during the night. At six o'clock the following morning, just seventy-two hours from the commencement of her labour, the pains suddenly ceased, and at this time there appeared to be, as it were, "a transference of the abdominal tumour from the hypogastric to the epigastric region." This change evidently pointed out that the uterus had lacerated, and that the infant had passed out of it into the abdominal cavity. She then fell into a quiet sleep, and in four hours she died.

Post-mortem examination.—On opening the abdomen, it was found that the anterior and upper part of the cervix and the lower part of the body of the uterus were extensively lacerated, and that the infant, with the placenta and membranes, had escaped into the abdominal cavity. The pelvis was extremely distorted.

Remarks.—Unfortunately, this case was brought by Mr. Ransome to be considered by those the great majority of whom were decidedly anti-Cæsareanists; and it is especially remarkable how violent party feeling was at one time in Manchester upon the question of the Cæsarean section. (See my observations on this operation.) But a strict examination of the capacity of the pelvis ought to have brought conviction to the minds of the most prejudiced opponents of this operation as to its positive necessity in this case. The result of craniotomy further proves what course ought to have been adopted.

I have forwarded, for the inspection of the Obstetrical Society, two drawings of the pelvis (see figs. 8 and 9), made by my respected friend Mr. Hunt, in order to show the physical impossibility of bringing a mutilated infant through it.

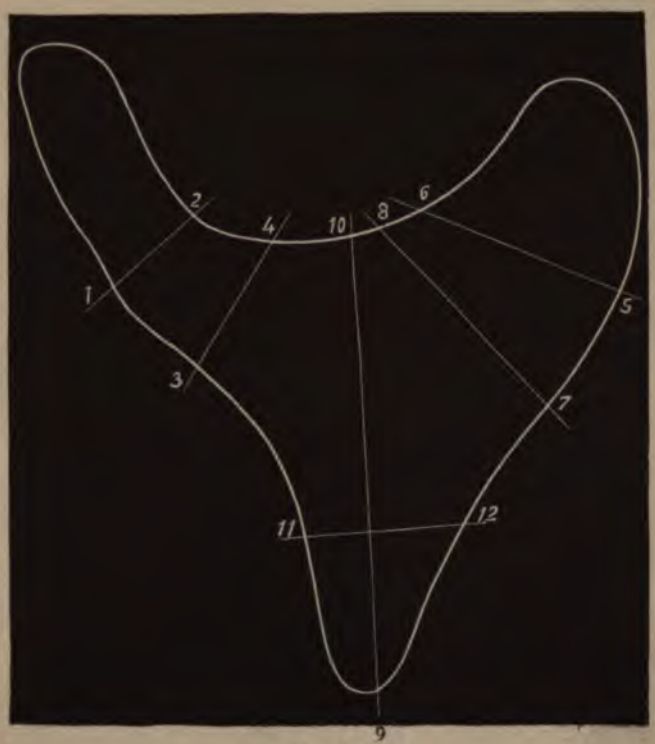


FIG. 8.

1, 2.—From the middle part of the fourth lumbar vertebra to the ilium on the right side, ½ inch.

3, 4.—From the lower edge of the fourth lumbar vertebra to the ilium opposite the upper edge of the middle of the acetabulum, on the right side, ⅝ of an inch.

5, 6.—From the upper edge of the fifth lumbar vertebra to the ilium on the left side, 1⅛ of an inch.

7, 8,—From the upper edge of the fifth lumbar vertebra to the ilium, opposite the upper edge of the middle of the acetabulum, on the left side, 1¼ inches.

9, 10.—From the lower edge of the fourth lumbar vertebra to the symphysis pubis, 2½ inches.

11, 12.—Across from one side to the other, opposite the anterior part of acetabula, ¾ of an inch.

CASE 5.—*Oblique laceration of cervix uteri, left side; fatal.*

On March 25th, 1825, I was requested by Mr. Ollier to visit a woman residing in a court in Brazennose Street; I was informed by him that she had been in labour thirty hours; the membranes had ruptured sixteen hours before my arrival. The pains had been very strong and forcibly expulsive. I found the os uteri fully dilated, and the head of the infant had partially entered the brim of the pelvis, in which position I was informed it had remained stationary for some hours. A short time before I arrived the patient was seized with a violent cramp-like pain, which was accompanied with a shrill exclamation of "Oh, my belly!" She then became ghastly; her countenance anxious and pallid; her skin covered with a cold sweat; and the pains, which up to this time were very strong, now entirely ceased. There was no discharge of blood per vaginam. I placed my hand upon the abdomen, which was very tender to the touch, and distinctly felt the body of the infant lying out of the uterus. As I have already said, the head had partially entered into the brim of the pelvis, and had obtained a fixed position. The parietal bones overlapped, and presented a sharpish ridge to the finger. Although the head had not receded, yet we had not the least doubt but that the uterus was ruptured, and therefore we determined upon immediate delivery. I applied the long forceps, and obtained a firm hold of the head. After using considerable force, as I did not succeed in bringing the head down with them, I had recourse to the perforator; and after opening the head and evacuating the brain, the infant was delivered by the craniotomy forceps. I then passed my hand and brought away the placenta, which I found detached and lying in the abdominal cavity. The rent was situated on the left side, extending forward and obliquely upwards. The capacity of the pelvis was considerably diminished, the antero-posterior diameter not being more than from two and a half to two and three quarter inches. The uterus contracted well, and there was only a slight discharge of a little coagulated blood. The symptoms which supervened were those of peritoneal inflamma-

tion; and they were combated by general and local bleeding, purgatives, and calomel and opium. She died the third day after her delivery.

Post-mortem examination.—The peritoneum was highly vascular; and the convolutions of the bowels were very considerably agglutinated together, and some serous fluid was found in the interstices. The laceration extended obliquely upwards and forwards from the left side of the cervix. The edges of the wound were ragged, and the uterine tissue in the immediate vicinity of it had the appearance as if it had been contused or beaten between two hard bodies. The brim of the pelvis measured rather less in the antero-posterior diameter than two and three quarter inches, as before stated.

Remarks.—This case affords a strong example of the mischievous influence of protraction. Timely delivery by craniotomy would most likely have saved the woman's life. There were no premonitory signs of impending danger, and only the crampish, agonising pain, with the shrill shrieks, announced the occurrence of the accident. The long forceps were first tried unavailingly, and perhaps not advisedly, as the pelvis was so contracted, and as there is scarcely a possibility of saving the infant in such cases. The uterine tissue was severely contused, and thereby softened. I do not mean as ordinarily understood by "ramollissement," but a destruction of its organisation by being beaten by the head of the infant against the pelvic bones. Premature labour would have been the most proper means to adopt, if the degree of pelvic contraction had been known; but as this was her first labour, Mr. Ollier was ignorant that such deformity existed.

CASE 6.—*Longitudinal laceration of the uterus anteriorly; fatal.*

I was requested by Mr. Dick to visit Mrs. —, æt. 36, residing in Bury Street, Salford, who was at the full period of her second pregnancy. For two days before he sent for me she had copious hæmorrhage, which was moderated by

rest and other suitable means. At five o'clock on the evening of the 7th April, 1825, I saw her, and found that a profuse discharge had again taken place. She had now slight pains; her pulse was quick and weak, and her countenance had an anxious expression. I found the os uteri high, rigid, projecting, and only slightly dilated. The head of the infant was lying over the brim of the pelvis. No part of the placenta could be perceived. Under these circumstances, it was judged proper to strictly watch the progress of the case, as delivery could not at this time be justifiably undertaken by forcibly dilating the os uteri; but as the strength of the patient was at this time considerably reduced from the copious discharge of blood, and as the flooding still continued, it was considered advisable to rupture the membranes. At eight o'clock in the evening I again visited the patient, and found the liquor amnii escaping very slowly, and which was slightly coloured. She was restless, and seemed fatigued; her pulse was quick, but perfectly distinct; the os uteri still continued high and undilated. Tinct. Opii, thirty minims, was administered, and fortunately produced some refreshing sleep. The pains afterwards became more frequent, and the head, which was still enveloped by the cervix uteri, descended lower into the pelvis. The os uteri had become softer, but still was not much more dilated. This report was furnished me. Having been again sent for at five o'clock a.m., 8th April, I found the patient was now restless, and very much exhausted; her pulse was very quick and feeble. There had been no more hæmorrhage. The os uteri, which had descended lower, had also become softer and more dilated. The pains, however, were still very ineffective. It was now quite evident the patient was gradually losing ground; and as the pains were too feeble to dilate the os uteri and afterwards to expel the infant, we decided to undertake artificial delivery. The hand was introduced, and the os uteri gradually dilated, and the infant was turned and delivered. This operation was both cautiously and slowly performed; but yet she did not bear it very well, and frequently required some brandy to be given

during its performance. She, however, seemed to have rallied a little after its completion. The placenta was naturally loosened and expelled. The discharge at this time was very moderate, but, from her very exhausted state, it was decided not to make further vaginal investigation.

The uterus could be felt above the pubes to be well defined, but larger than is common after the completion of the labour. She continued to sink, and at the end of three hours she expired.

Post-mortem examination.—Present Mr. Dick. Upon dividing and turning aside the abdominal parietes, the uterus was found larger than common. On raising this organ up, an opening was discovered in the peritoneum where it is reflected over the bladder, and there was some coagulated blood lying here. The bladder was empty and uninjured. The laceration extended upwards in a longitudinal direction through the os, the cervix, and part of the body of the uterus. The uterine tissue appeared sound, and the wound had the character of a simple tear. The pelvis was of standard size. All the organs had a particularly white appearance, which had doubtless been produced by loss of blood.

Remarks.—I felt very anxious to have my opinion corroborated by a post-mortem examination. The sudden sinking of the pulse during the operation led me to suspect that rupture had taken place; but this I could not ascertain by passing my hand per vaginam, in consequence of the very exhausted condition of the patient. The act of dilating the os uteri, and then passing the hand in search of a foot, in a contracted uterus, is an operation which always produces great excitement; and a sudden sinking of the vital power—the pulse becoming excessively frequent and weak during the performance of such a painful operation—is an unfavorable symptom. There was no premonitory sign to mark the time when the accident took place; but the state of the pulse led me to suspect, although the previous hæmorrhage greatly obscured and rendered this only an uncertain indicator.

The height of the os uteri, its rigidity, the absence of dilatation, and its great projection into the vagina, were the grounds of objection to an earlier delivery. And even afterwards, when the os uteri had assumed a more favorable condition, it was undertaken as an operation of necessity rather than one of choice. If the parts had been in a different state, an earlier operation would have been right; but the result shows that the delay was perfectly justifiable. When the os uteri is found to be situated very high, and at the same time is rigid, and more especially if it also projects into the vagina, its dilatation being so slight as only just to admit a finger, such a case must always be considered very unfavorable for performing the operation of turning. I have met with several cases in which there existed slow, insidious, and continued hæmorrhage, and yet the os uteri maintained these unfavorable characteristics, and the patients have been brought into great danger before delivery could be performed, which should in all such instances be as long delayed as the safety of the patient will allow. These several organic states rather indicate that pregnancy is not completed; and we know that a projecting os uteri shows that the cervix is not completely developed. In all labours in which the os uteri is in this very unfavorable state for dilatation to take place, there exists great danger of laceration. Another case occurred to one of my hospital colleagues in which the child presented with the arm. The os uteri was only slightly dilated and rigid. In this case turning was undertaken, but before it was accomplished the vital powers suddenly gave way; her pulse became scarcely perceptible, and in a few hours she died. He stated a laceration was found in the os and cervix uteri, and also in the upper part of the vagina, after death.

CASE 7.—*Transverse laceration of the uterus on the left side; fatal.*

For the particulars of the following case I am indebted to my respected friend Dr. Stephens.

A poor woman, æt. 39, residing at Failsworth, mother of

several children. All her four labours, with the exception of the last, had been natural. In that she had experienced great difficulty, and the child was still-born; she was a patient of Mr. Pegg. At one time she enjoyed excellent health and was very strong, but for the last three or four years her health had been declining.

On Wednesday evening, May 15th, 1826, her labour came on, and continued all night, during which she had several rigors and vomited. Mr. Pegg, having experienced so much difficulty in her former delivery in consequence of pelvic distortion, became alarmed with these symptoms, and therefore immediately sent for Mr. Jordan. He arrived about three o'clock on Thursday. About two o'clock she had a very severe rigor, from which she very gradually and imperfectly recovered. Her pulse was then scarcely perceptible, and she appeared to be sinking. After a short time she rallied a little. When Mr. Jordan arrived, he found her with a pale countenance and great constitutional depression; her pulse was quick and weak; she had great and constant pain in the side of the abdomen. By a vaginal examination, "the head of the infant was found jammed at the upper aperture of the pelvis," "the forehead resting on the promontory of the sacrum and the occiput on the pubes." The os uteri was dilated, and the waters were discharged, as the membranes had spontaneously ruptured in the course of the preceding evening. It was decided to perforate the head of the infant; and when the instrument was brought into contact with it for this purpose, it receded into a space laterally, although a hand had been placed upon the abdomen to steady the uterus. Failing to accomplish this operation, it was decided to pass the hand into the uterus for the purpose of turning the infant. This operation was with some difficulty performed, and after using very considerable force "the hips, chest, and the shoulders were born;" but when the head came, so much difficulty was experienced as to require its perforation. The hand was again introduced, and the placenta extracted. Her exhaustion continued to increase, and at ten o'clock the same night (May 16th) she expired.

Post-mortem examination.—The following day the body was inspected. On opening the abdomen, about three pints of fluid blood were found, besides some clots and serous fluid. On this being removed, "a large rent was found in the left iliac region just opposite the acetabulum; it was about seven or eight inches in length, and extended over and into part of the psoas muscle, and somewhat into the fore part of the body of the uterus." The round ligament was found stretching across this rent, which was quite insulated, but it was adherent at the groin. On passing the finger through this rent, it was found to go into the body of the uterus. The laceration extended from just above the os uteri on the left side upwards and outwards, and was large enough to easily admit the fist. There was also a communication with the vagina. The peritoneum, where it is reflected from the upper part of the vagina over the posterior part of the bladder, was also torn through. The bladder was separated from the uterus, and there was a small lacerated opening found in the bladder sufficient to admit the forefinger. This viscus was empty. The bowels were not inflamed, but distended with flatus. The edges of the wound were jagged and very thin: "I could scarcely say there was softening of the uterus either at this part or any other." "The pelvis was decidedly much contracted, and this was produced by malacosteon."

Remarks.—Dr. Stephens has with great minuteness detailed the circumstances attendant upon this case. It furnishes us with another instance in which collapse is produced by the great effusion of blood into the abdominal cavity. It is surprising that immediate death did not take place from the effect of the loss, superadded to the shock which in these accidents is nearly always inflicted upon the nervous system.

The pelvis was considerably distorted by malacosteon, which doubtless had commenced previous to the last labour; and although Dr. Stephens was disposed to doubt whether there was softening of the uterine tissue, yet I am inclined to think, from the great extent of the laceration, that not

only the uterine tissue, but that also of the whole pelvic viscera was in an unhealthy state. This opinion is strengthened by the history of the case. The labour was only of moderate duration, and the pains are not reported to have been strong; so that it is reasonable to suppose the organisation of the uterus had not suffered from the effects of contusion which sometimes happens during protracted labour.

CASE 8.—*Transverse laceration of the uterus posteriorly; fatal.*

On the 7th of April, 1827, I was requested by Mrs. Jeal, an hospital midwife, to visit a patient in Angel Street, who had been in labour thirty hours; this was her fourth pregnancy. I was informed the membranes had ruptured about two or three hours after the commencement of her labour, the os uteri being at that time only very partially dilated. The pains had varied very much in strength, but for several hours they had been strong and bearing down. A short time before I was sent for, she suffered one or two violent pains, and complained of the agony in her belly. The pains afterwards ceased.

I found her in a very collapsed condition; her pulse was very feeble, her countenance was much sunk, and she had vomited a large quantity of a very dark-coloured fluid like water containing coffee-grounds. I was informed that the pains had been all along very feeble. The abdomen was very tender, and so much tumefied that I could not feel the uterus or infant through the parietes. She was troubled with hiccough. On examination, I discovered that one hip was presenting at the os externum.

Before proceeding to deliver her, I ordered some brandy to be administered. I then passed the finger for the purpose of hooking it into the groin; but the presentation immediately receded, and I was therefore compelled to carry my hand through a lacerated opening in the uterus into the abdomen, and, coming in contact with a knee, I seized it, and brought it down, and afterwards easily finished the

delivery of the infant, which had been dead for a long time. The placenta, which was already detached from the uterus and lying loose in the vagina, was immediately withdrawn. In order to ascertain the extent and situation of the mischief, I introduced my hand, and, to my great surprise, found a large portion of intestine lying within the os uteri, and which had protruded through a lacerated opening which was situated on the back part of the cervix uteri, and which I immediately returned. She was now very much exhausted, and appeared to be sinking. She expired in three or four hours after I left her.

Post-mortem examination.—Present, Mr. Lowe. 'The peritoneum was very highly inflamed, and there was a great quantity of bloody serum in the abdominal cavity. The laceration was situated posteriorly in the upper part of the cervix uteri, and ran in a transverse direction. The edges of the wound appeared as if they had been bruised, and they were ragged. The uterine tissue in the vicinity of the laceration seemed as if its vitality had been destroyed. There was a diminution in the antero-posterior diameter of the brim of the pelvis, which measured about three and a half to four inches. This arose from the base of the sacrum projecting more inwards. The accident most probably happened a short time before the agonising pain took place, and when the pains ceased. As far as I could calculate, the dark-coloured fluid was vomited about four hours before she was delivered. There can be no doubt that the organisation of the posterior part of the cervix uteri was considerably and dangerously injured, if not totally destroyed, by the long-continued pressure it had sustained betwixt the presenting part of the infant and the projecting part of the sacrum. Most likely, if the membranes had not ruptured early, the event might have been different.

CASE 9.—*Longitudinal laceration of the uterus; fatal.*

The following case is related by Mr. Roberton, in his 'Essays and Notes,' p. 293, and therefore I shall only

transcribe a few remarks on it from my own notes, which were made at the time of its occurrence.

In May, 1827, I was requested by Mr. Roberton, my hospital colleague, to visit a poor woman residing in Preston Street, St. George's Road. On my arrival at eight o'clock a.m., I found her in a very collapsed condition. As there was no flooding to account for this general vital depression, I was convinced that some serious organic accident had happened—most likely laceration of the uterus.

Mr. Roberton kindly informed me he had been called up at midnight, and at that time found the membranes were ruptured and the os uteri was dilated; the head of the infant presented, and lay over the upper aperture; the pains were of a spasmodic or crampy character, and the woman was restless and tossing about. These circumstances induced the midwife, who had not been many hours with the patient, to send for Mr. Roberton. He recommended patience. However, at six o'clock a.m. he was again requested to visit her. He found that the pains, which had been agonising, had now ceased; her skin was cold and clammy, and she vomited frequently; the head of the infant had slightly descended. After a reviewal of the attendant circumstances, we decided on immediate delivery; and as the infant's head had commenced its entrance into the brim, and as there appeared no recession of its body, we decided to apply the long forceps, which were readily passed and fixed on the head; but after a full trial of them the head could not be brought down. Craniotomy was then decided on, and performed by Mr. Roberton. On removing the placenta, I distinctly discovered an extensive laceration on the left side of the cervix, which ran in a direction upwards. The symptoms that afterwards appeared were those of peritoneal inflammation, which were combated by an active antiphlogistic treatment. She died on the third day.

Post-mortem examination.—On opening the abdomen, the general peritoneal membrane was seen to be highly inflamed; the convolutions of the intestines were glued together by the effused lymph, and there was a quantity of serum effused in

its cavity. The uterus being raised, a longitudinal laceration existed on the left side of the cervix; the edges of the wound were ragged, and that part nearest the os uteri had a contused character; the brim of the pelvis was less than natural, from the promontory of the sacrum projecting somewhat inwards.

The remarks upon this case need be few. The spasmodic pains which existed, along with the mechanical impediment from the projection of the sacrum, may be conjointly considered as the cause of this serious accident.

Mr. Roberton says—"The period from the commencement of labour to the occurrence of rupture was short of *twelve hours.*"

CASE 10.—*Longitudinal laceration of the uterus anteriorly, and also laceration of the bladder; fatal.*

August 10th, 1828, Hannah S—, æt. 40; pregnant of her eleventh infant. She sent for Mrs. Buckley, her midwife, at two o'clock a.m. In an hour afterwards the membranes ruptured, and was succeeded for a short time by strong labour-pains. The liquor amnii dribbled away, and the uterine contractions became less effective. The patient complained of a fixed pain in the left side of the hypogastric region. At this time the os uteri was situated very high, rigid, and only slightly dilated. At five o'clock Mrs. Buckley sent for a surgeon, as the patient's friends were very anxious about her. Her strength was gone; the pains were frequent; the os uteri was now disposed to dilate. The head of the infant presented. At ten o'clock she was again seen; and as everything was found favorable, he recommended the case to be trusted to the natural efforts, and ordered a common enema to be administered.—At twelve o'clock at night he was again sent for. He found she had vomited a little. The skin was natural, and there had been no shivering. The os uteri was not yet dilated; but the general state of patient was very favorable. He still decided not to interfere, fully expecting that the delivery would be safely terminated. The pains were at this time

feeble and irregular, and consequently not very effective. Tinct. Opii, thirty minims in a draught, was ordered for the purpose of obtaining some refreshing sleep. At two o'clock she vomited a very considerable quantity of a dark-coloured fluid; and the pains entirely ceased, and she now lay quiet. In about a quarter of an hour after my arrival she was seized with convulsive twitching, and immediately expired.

Post-mortem examination.—The belly was very much distended with air. Having divided the abdominal parietes, and turned them aside, a large quantity of bloody fluid was seen. The breech, trunk, and lower extremities of the infant, which had escaped from the uterus, were found in the abdominal cavity, enclosed in the membranes; whilst the head was lying within the os uteri, and partially engaged in the brim of the pelvis. The position of the head was natural. The fundus uteri was well contracted. The infant had apparently been dead for some time. The placenta was lying loose in the abdominal cavity. The peritoneum was generally very highly inflamed. After removing the infant, the laceration was found to extend through the lower portion of the body, cervix, and os uteri. It was situated anteriorly, and a little inclined to the left side; the edges of the wound were ragged; and the surrounding tissue appeared as if it had suffered from contusion, and its vitality nearly destroyed. A quantity of blood was extravasated.

The peritoneal covering on the anterior part of the uterus and the posterior part of the bladder was raised from its connection and lacerated. A large opening was found in the back part of the bladder. The brim of the pelvis was less than natural; its antero-posterior diameter measured about three and three quarter inches. The superior promontory of the sacrum projected rather more acutely than usual, and there was a rough projection on the inner surface of the pubes.

Remarks.—There were no symptoms in this case which could be supposed to indicate that so serious an accident had taken place, except the vomiting of the dark fluid like coffee-grounds, which only occurred a short time previous to death. Laceration of the uterus usually happens when this organ is

in a state of action, by which a portion of the infant may be forced through the wound into the abdomen. In this case the breech, &c., had most likely passed through the lacerated opening very slowly, as the head was not disturbed by the change. The absence of several of the common signs of this accident may be reasonably attributed to this circumstance. The appearance of the detached peritoneal covering of the anterior part of the uterus and that of the posterior part of the bladder shows that it must have been considerably raised, and carried upwards by the breech of the infant before it gave way after the muscular structure was torn.

The extent of the laceration was doubtless increased by the breech of the infant carrying the fundus uteri backwards, whilst the os was firmly fixed by the head in the pelvis. From the inflamed state of the peritoneum, it is right to conclude that the laceration had taken place some time previous to death, although the general condition of the patient at one o'clock, and the position which the head maintained, might reasonably lead to a different opinion.

In reviewing the progress of the labour, and the results of it as found after death, there can be no doubt that delivery might have been easily, and indeed ought to have been earlier performed, either by the long forceps or by craniotomy.

CASE 11.—*Longitudinal laceration of the anterior portion of the cervix uteri and bladder; fatal.*

At ten o'clock on Sunday morning, October 20th, 1828, I visited Alice W—, residing at 3, Cooke Street, Salford, who was in labour of her second infant. Mrs. Booth, one of our hospital midwives, was in attendance. I was informed that her first labour was tedious, and that she suffered very much during its progress, and was ultimately delivered by Mr. Wilson by the perforator and crotchet. The remembrance of her former labour had a depressing effect upon her mind; and Mrs. Booth was on the same account induced to make an early application to me at an early period of labour.

By a vaginal examination, I ascertained that the os uteri was dilated to about the size of a dollar, and that it was also thin and soft. The membranes were unruptured, and during a pain they protruded through the os uteri. I afterwards carefully examined the pelvis, and fully satisfied myself that it was of a sufficient capacity to freely allow the head of an infant of standard size to pass through it.

During this examination, I discovered the head, which presented with the vertex towards the left acetabulum, but it was placed a little nearer to the symphysis pubis than is usual. The vagina was cool and moist; her pulse was natural, and her countenance good.

In order to ascertain the true position of the uterus in reference to the axis of the trunk, I requested the patient to rise from the bed. As soon as she had assumed the erect position, I was struck with the very great projection forwards of the fundus uteri,—constituting an extreme case of anterior obliquity of the womb. The knowledge thus obtained induced me to recommend the case to be trusted to the natural efforts. I assured the patient she would do well without the use of instruments, and that I had only one plan to suggest to her, which was a strict observance of keeping the recumbent position and constantly lying on the back. She faithfully promised to comply with this injunction. A bandage was placed round the abdomen. At four o'clock in the afternoon my immediate attendance was again requested. On my arrival I found the poor creature in a most dangerous condition. Her countenance was ghastly and expressive of great anguish. She had constant vomiting, which at first consisted of nothing but the ingesta, but very soon afterwards the ejected matter had assumed a dark colour like coffee-grounds; her general surface was pale and bedewed with a cold sweat; her pulse was feeble and nearly imperceptible. These symptoms clearly indicated that some serious organic lesion had happened, and in my own mind I felt convinced that the uterus had ruptured. On a very careful investigation, I found the

os uteri fully dilated. The membranes were ruptured, and the head was lying loosely over the superior aperture of the pelvis, and upon pressing it with the finger it appeared to recede. The abdomen, on examination, was found exquisitely tender; but I could discover no indication that the child had escaped from the uterus. I at once decided to perforate the head, and requested the midwife to steady the uterine tumour by an extended pressure of her hands. No sooner, however, was the instrument brought into forcible opposition with the head than it immediately receded and rapidly passed into the abdominal cavity, being followed by the rest of the body. As no further advantage could be derived from this mode of proceeding, I withdrew the instrument and introduced the hand, when I discovered a rent on the anterior part of the cervix uteri. The laceration was situated immediately above the os uteri, through which I easily passed my hand in search of the feet. During this part of the operation I was compelled to carry my hand very high, and in its progress I distinctly felt the convolutions of the bowels. On reaching one foot, I brought it down, and experienced a slight difficulty when the breech came to enter the brim, which was increased when the head passed through the same part. This obstacle was overcome by adjusting the diameter of the head with those of the pelvis without the aid of any instrument. A slight discharge of blood, partly coagulated, now took place. I introduced my hand and extracted the placenta, which I found loose in the abdominal cavity. During her delivery she was very much exhausted, and required from time to time the administration of brandy. After its completion some more brandy was given, and also a full dose of opium.

In three hours she was again visited, and found to have considerably recovered from the shock. She complained of great tenderness in the belly. She had not passed any urine. She had not slept, but she felt drowsy. A further dose of opium was prescribed; the catheter was introduced, but there was only a little bloody serum withdrawn. Linseed cataplasm was applied to the belly.

The symptoms from this time were those of violent peritoneal inflammation, and were combated by leeches, which were twice repeated, calomel and opium, saline medicines, cataplasms, enemata, with castor oil and spirits of turpentine. The catheter was several times passed, but no urine flowed. There was a perceptible urinous smell in the discharges. She continued to suffer agonising pain until Wednesday morning, when symptoms of sinking began, and early in the afternoon she died.

Post-mortem examination.—Present, Dr. Freckleton and Mr. Brownbill, sen. Upon opening the abdomen, the flaps were with difficulty reflected from the adhesion which had taken place to the parts beneath. The omentum was firmly glued to the bowels, and the convolutions of these organs were universally adherent by lymph of a soft tenacious consistence. The colour observed upon this surface had a beautiful variegated appearance. On separating the convolutions of the intestines, a serous fluid with floating flocculi of lymph was seen. The peritoneal covering of the uterus was highly vascular. When this organ was raised up, an extensive laceration of both the muscular structure and its peritoneal coat was discovered. It was on the anterior portion of the cervix, and ran upwards in a longitudinal direction. On introducing a catheter into the bladder, it was found that this organ was lacerated on its posterior part.

These organs were then removed, and the pelvis was accurately measured. The brim in its antero-posterior diameter was four and a half inches, transverse five and a quarter, and the oblique five inches. Both the cavity and the outlet were fully of the standard size.

There were no long projections found at the symphysis pubis, and the linea ilio-pectinea was not sharper than usual.

Remarks.—As soon as all things were adjusted for the patient's advantage, I took the opportunity of interrogating the midwife, how the day had been passed after my first visit, and what were the attendant circumstances at the time the case assumed the awful change. She told me that

the patient had strictly observed the position of lying on the back until the time above stated, when she obstinately determined to get up; and as soon as she had raised herself in the perpendicular position upon the floor, she was seized with an agonising pain, accompanied by a violent exclamation, "Oh—my belly! oh—the cramp!" She became faint, pale, and vomited; and it was with great difficulty she could be got upon the bed.

Mrs. Booth further stated that the os uteri had progressively opened and was fully dilated when the membranes ruptured, which took place about two hours before these symptoms occurred. The head was just beginning to enter the brim of the pelvis.

In the foregoing case it is natural to inquire what was the cause of the fatal catastrophe, as every circumstance promised so propitious a termination when I first visited the poor creature. There appears only one to which I can attribute the result. From long experience, I know that obliquity of the uterus is an influential cause of protracted labour. The infant's head cannot favorably enter into the brim, and thereby the uterine fibres are put unequally upon the stretch, which frequently induces irregularity of action, and therefore we need not wonder that in such cases, when the head of the infant is forced so unfavorably upon several points of the pelvis, that rupture of the uterus may take place. This is the only traceable cause in the present case. She was put upon her back, and so long as she kept that position all was well.

The edges of the wound were clearly defined, and the surrounding uterine tissues were apparently healthy, and showed no signs of having suffered from contusion or any tendency to organic tissue-softening.

Case 12.—*Transverse laceration of the uterus anteriorly, and also of the bladder; fatal.*

On the 25th March, 1829, I was requested by a midwife to visit Margaret Acton, who was stated to be very ill. I obtained the following account:—The patient was forty

years of age, and this was her sixth pregnancy. Her labour commenced at eight o'clock the preceding evening. As the pains were only slight, the midwife was not sent for until eleven o'clock, when the pains had become much stronger. She found the os uteri only slightly dilated, but the pains were regular and strong.

In the course of about three to four hours the os uteri was tolerably well dilated, and at this time the membranes ruptured. The head of the infant, which until now had remained above the brim, began to descend; and at ten o'clock A.M. it had fully occupied the cavity of the pelvis. Up to this time the pains had been very strong, and continued so for three or four hours, when the patient became very pale and cold. She also shivered and fainted several times. The labour-pains, which had been hitherto very strong, now ceased.

The midwife heedlessly allowed the patient to remain in this condition until eight o'clock in the evening before she sent for me. Upon my arrival I found the poor woman very faint and cold, and her pulse so feeble that I could scarcely feel it. Her countenance was very pallid, her breathing laborious, and she had continued vomiting. She complained of great pain in her belly, and of great oppression in the epigastrium. The vagina was cool and moist. I found the head of the infant had fully entered the pelvis, but it had not descended so low as to distend the perineum. Her condition induced me to conclude that some serious accident had occurred, and most likely that the uterus had lacerated. I decided on immediate delivery. The forceps were readily and effectually applied on the head of the infant, which was extracted in a few minutes. The delivery of the rest of the body was altogether artificial, for no assistance was derived from the uterus. Great difficulty was experienced (although I used considerable extractive force) when the shoulders came to pass through the brim, which was owing to one (the right) shoulder lying over the pubes, having passed through the rent. I therefore passed my hand upward, and hooked my finger into the axilla; and

after having by this means brought down the shoulder, the rest of the body soon followed. The placenta, being loose, was removed without trouble. The patient was very much exhausted, and her pulse was very weak. She had continued vomiting, which harassed her very much; and there was a great tendency to syncope. A little gruel with some brandy was taken, and a draught with Tinct. Opii gtt. xxv. was administered. In the morning I found she had passed a very restless night; she complained of great pain in the belly, which was much aggravated by pressure. She had now constant vomiting; her breathing was laborious, her skin was covered with a cold sweat, and her pulse was extremely feeble. She never rallied; on the contrary, her vital powers appeared to become gradually lower. Light poultices were applied on the belly. Thirty drops of Tinct. Opii was ordered; and as she had not passed any urine, the catheter was introduced, and a small quantity of bloody urine flowed. She died at three o'clock p.m.

Post-mortem examination. — Present, Mr. Lowe, Mr. Stephens, and Mr. Bryden. The body was inspected thirty hours after death. Upon opening the abdomen, a large quantity of coagulated blood was found upon the intestines. The peritoneal covering of the stomach and bowels was highly inflamed. The uterus was transversely lacerated at the upper and anterior part of the cervix, and the lower part of the body. The edges of the wound were ragged; and its tissue was softened, and presented something like an approach to gangrene. The anterior peritoneal covering of the uterus was raised up and lying loose; and that part of the membrane which is reflected over the posterior part of the bladder was also raised up, and under this two openings were traced into this organ. The inner membrane of the uterus was of a very dark colour.

Remarks.—The usual signs which indicate the occurrence of this serious accident were absent in this case. There were no sudden and shrill exclamations. She had no feeling of anything giving way in the belly. The presentation of the

infant did not recede. The violent syncope, her coldness and feeble pulse, and the vomiting, were the only symptoms from which I could imagine such a serious injury had happened. Although the head of the infant remained in the pelvis, its legs, thighs, and lower part of its body, and the right shoulder, had evidently passed through into the abdomen. The urinary bladder was undoubtedly lacerated by the body of the infant raising up and detaching the peritoneum when it passed from the uterus. The bloody fluid which was withdrawn by the catheter had, no doubt, passed into the bladder from the abdominal cavity. The extent of the laceration was probably increased by the difficulties experienced in the delivery in consequence of the unfavorable fixture of the shoulder over the pubes. But, notwithstanding this, there can be no doubt that this procedure was the only justifiable course to be adopted, as the presentation had not receded.

Case 13.—*Partial longitudinal laceration of the muscular structure of the cervix uteri; recovery.*

Having been called by Mr. Roberton to consult on the woman's case of which the following is a report, I shall first quote a part of his statement:

"October 31st, 1829.—Mary K—, Fletcher Street, a patient of the Lying-in Hospital, tall, apparently healthy and vigorous, and about thirty years of age, and has had six children. The midwife (Mrs. Buckley) states that the patient's previous labours were tedious and difficult; but I could not learn that she had ever been assisted by instruments. The children were born alive. This morning I found the os uteri dilated, the membranes ruptured, and the head presenting naturally at the brim, but without having in the least entered the inlet. The most notable circumstance was the state of the anterior lip of the womb, which was remarkably œdematous and enlarged. At first I took it for the bladder prolapsed, but on introducing the catheter I found how the matter was. The belly was very prominent, and somewhat pendulous. This condition of the labour, the midwife as-

sured me, had existed for eighteen hours. The pains had all along been trifling.

"At ten o'clock in the evening, on making a careful examination along with Mr. Radford, whom I called in consultation, we found the conjugate diameter of the inlet was little, if at all, more than three inches. There was no fever, neither were the parts hot; yet the patient had frequent vomiting." The pains were of a very trying nature, and, as Mr. R. says, "crampy and very severe." "She tossed about, and was restless and impatient. The head did not in the least advance."

The forceps might have been used if the os uteri had not been so much swollen. From the sharp and sudden exclamation she made during the preparation for her delivery, we thought that the uterus was ruptured, and therefore we lost no time in opening the head with the perforator. The extraction was effected with the craniotomy forceps. On making an examination after the birth, the cervix uteri was found "partially" ruptured posteriorly from two to three inches in extent, the rent not (so we imagined) penetrating into the peritoneal cavity. This patient recovered. The duration of the labour was about thirty-five hours.

Remarks.—The foregoing case is highly interesting, inasmuch as there are two circumstances belonging to it, each of which is quite equal to become a cause of this accident. Contraction at the brim of the pelvis opposes (in proportion to its degree) the progress of the head of the infant downwards, in cases in which the uterine action is strong and regular. But in cases of pelvic contraction, when the uterus is acting irregularly, or when the pains are of a spasmodic character, there is not only a mechanical obstacle to the descent of the head, but there exists great danger of laceration of some portion of the uterus by its own contraction. If, after the membranes are ruptured (as happened in this case), the infant's head becomes forcibly pressed for a long time upon the linea ilio-pectinea, during which time one set of the uterine fibres is in powerful action, whilst another portion of the muscular tissue of the uterus is comparatively

quiescent, it is quite obvious that there is great danger of laceration taking place. It is highly important, then, under such circumstances, to anticipate this great risk, and endeavour, as far as possible, to prevent it, first, by endeavouring to restore equal and regular contraction of the uterus by position, opiates, venesection if indicated, &c.; but, above all, by a timely delivery.

Another unfavorable condition existed in this case, viz., the anterior obliquity of the uterus. This position of this organ during active labour, if not the sole cause, at least aids the mischievous operations of any other cause in producing this accident. The recovery of this patient, doubtless, depended on the small extent of the laceration; its not penetrating the peritoneal membrane; and by the patient's being delivered as quickly as possible after the accident had happened. It was fortunate we were present at the time of its occurrence.

CASE 14.—*An oblique laceration of the cervix uteri on the left side; fatal.*

At half-past eleven o'clock on Thursday night, January 7th, 1831, I received a message from my friend Mr. Partington, requesting my attendance on Mrs. D—, residing in Heath Street, Chorlton-on-Medlock. This was her eighth pregnancy. She was now in a very dangerous condition. Mr. Partington kindly related to me the following particulars:—He said the labour commenced about eleven o'clock a.m., and had been slowly progressing from that period until six o'clock in the evening. At four o'clock he made a vaginal examination, and found the os uteri dilated, and the membranes protruding as far as the os externum. At six they gave way, and the liquor amnii was discharged. The head of the infant was now felt to be in a natural position at the brim of the pelvis. The pains, which had hitherto been weak, now changed and became very powerful. They did not appear to produce much influence upon the head, for it advanced very slowly, and its apparent progress depended more on the elongation of the scalp which took place

than from any decided descent of the base of the skull. The pains continued to be thus violent until eleven o'clock at night, and increased in intensity as they successively occurred. She was seized with one of a very agonising, crampish character, which was accompanied with a shrill cry of "Oh! my belly—the violent pain!" After this the pains ceased. When I saw the patient, I found her in the state I shall now describe. Her countenance was ghastly, but it had not the same degree of anxious expression which is sometimes observed in similar cases. The pulse was 130, and very feeble. Her skin was covered with a cold sweat; she had vomited. When the hand was placed on the belly, a slight degree of pain was produced. No part of the infant could be felt through the abdominal parietes; but there was a sensation conveyed to the hand as if some fluid was interposed between the uterus and the infant's body. There was no hæmorrhage. Upon examination per vaginam, I found the head perforated, but its base was still situated above the brim of the pelvis. Mr. Partington mentioned he had just decided to apply the forceps when the accident happened, and therefore he concluded to abandon the use of this instrument; and, in order to hasten the delivery, he perforated the head, and used a blunt hook for the purpose of dragging the head downward. I was desired to undertake the subsequent management of the case; I therefore withdrew the blunt hook, and introduced Holmes's craniotomy forceps. After the scalp and cranial bone had been fairly engaged within their grasp, and a firm purchase obtained, I drew down, and the head was brought along and through the os externum. The instrument was then removed. Pains now occurred at very short intervals, which acted successively on the different parts of the infant until it was fully born.

A bandage was now applied; but it was immediately removed, as great pain was produced by its pressure. I introduced my hand for the purpose of extracting the placenta, which I found partially separated. On again passing my hand, I discovered a laceration (as far as I could judge)

about two to three inches long, and running from the left side obliquely upward and forward. The antero-posterior diameter of the pelvis was contracted, not being more than three inches. An anodyne draught, consisting of a drachm of laudanum, was now given; but it was soon rejected. Afterwards a grain of solid opium was ordered to be taken immediately, and to be repeated if necessary. Mr. Life, who was present at the delivery, remained with the patient all night, during which she had some comfortable and refreshing sleep. On our visit the following morning, we found her countenance really more cheerful than we could reasonably have expected after such an accident; but unfortunately the case from this time changed, and began to assume a character of peritoneal inflammation. The pulse became frequent and contracted; her skin was hot, and she had great thirst; her tongue was furred, and she felt intense pain in the abdomen, which was very considerably aggravated by pressure. The treatment consisted of two general bleedings, leeches, calomel and opium, poultices, turpentine lotion, enemata, catheterism, &c. The blood drawn was cupped and buffy. The symptoms continued unsubdued, and the patient sank on the second day after her delivery.

Remarks.—This is another instance of laceration of the cervix uteri, doubtless caused by a diminution in the capacity of the brim of the pelvis. The contractions of the uterus were very active and powerful, and therefore it is fair to conclude that no softening of the structure of this organ previously existed, or else its tissue would not have so long withstood the violence of its efforts. The mischief inflicted was most likely a clear rent, as there was no previous evidence that the texture of the uterus had suffered so much from contusion as to have produced such a result. The infant did not escape into the abdomen through the lacerated opening, and therefore it is nearly certain that the peritoneum was not very extensively torn. It is very remarkable that the uterus, after having reposed for some time after the occurrence of the accident, should again have

actually acquired its expellent power. This activity of the uterus clearly proves the truth of the above remark, that the peritoneum had nearly if not altogether escaped injury.

Permission to inspect the body could not be obtained.

CASE 15.—*Longitudinal laceration of the muscular structure of the cervix and body of the uterus; fatal.*

Hannah S—, of Back Blackley Street, æt. 39, rather tall and very thin, of a swarthy complexion, occupied as a clear-starcher, of extremely industrious habits, and pregnant of the ninth child. Her health during pregnancy had been tolerably good, with the exception of slight stomach complaints, which were most probably produced by the uneasiness of her mind as to the certainty of the fatal event of her expected labour.

Mrs. Upton, midwife, was summoned to attend her at eleven p.m., January 28th, 1831, and was told that the liquor amnii had escaped. Upon making an examination per vaginam, she could not discover any dilatation of the os uteri. She therefore left her, desiring to be sent for again as soon as the pains came on. The day following, at four p.m., Mrs. Upton called (not having received any message), and the report made was that the patient was much the same, but that less water was dribbling. No examination was made. At nine p.m. of the same day her attendance was again requested. On her arrival she found that the pains were apparently strong, but considered them as more the result of voluntary effort than uterine contraction; and this opinion was corroborated by the unchanged condition of the os uteri. As her belly was extremely pendulous, Mrs. Upton placed the patient on the horizontal position, enjoining her to avoid all voluntary effort. Her skin during the whole progress of her labour was rather cold; but the midwife judiciously applied hot bricks to her feet, hot napkins to the belly, and gave her warm diluents to drink. Notwithstanding the injunction laid upon the patient as to the necessity of preserving the horizontal position, she would get out of bed and bear her pains upon her knees, from which

position, suddenly starting, she threw herself upon the bed; this was frequently repeated. At a quarter before eleven, Mrs. Upton again made a vaginal examination, when she found the os uteri dilating and the head entering the superior aperture of the pelvis. The husband of the patient became anxious to have another opinion, and a message was sent to my house. My pupil, Mr. Bryden, went down to see her, and upon his return reported that every circumstance connected with labour was favorable, and that he had no doubts as to the propitious termination of the case. About half-past twelve she was seized with vomiting, which was accompanied with great coldness of the skin. The midwife requested her to take a little brandy-and-water, which materially relieved her. After a short time she became worse: her countenance became pallid; her breathing was slightly hurried, and frequently interrupted by deep sighs; her pains (which until this period, one o'clock, had continued) now subsided. Under these circumstances, the husband was despatched for me; and during his absence she suddenly rose from the bed and stood on the floor. She now became faint, sighed and moaned, but was supported by the midwife, who laid her upon the bed, where she immediately expired. On my arrival, I found the event as just stated; and on making inquiry as to her complaints during the progress of labour, was informed that she had moaned much, but had never uttered any sudden exclamation or shriek. I passed my finger into the vagina, and clearly perceived the head of the child, which had partially entered the brim of the pelvis; and I found the os uteri not more dilated than the size of a dollar. The account received from the midwife was that no blood had been discharged, and this was corroborated by my vaginal examination, the finger not being tinged with the colour of that fluid. I placed my hand upon the abdomen, and was much surprised to feel two tumours running parallel with each other, a groove or depression evidently existing between the two, aad yet the sensation communicated to the hand was that they were connected together.

Post-mortem examination.—The body was examined twenty-one hours after death, in the presence of Mr. Dick, my pupil Mr. Bryden, and Mr. Bird. The general surface presented an exsanguineous character, similar to what is observed as the result of excessive uterine hæmorrhage. On opening the abdomen, the peritoneum appeared perfectly free from disease, nor was any fluid discovered in its cavity. The peculiar feeling presented to the hand upon making an abdominal examination (referred to above) was now fully explained. The uterus, which was very large, formed one segment of the tumour (viz., the left), and the child's body covered by the peritoneum the other. Upon making a very careful examination of these parts, not the smallest laceration was discoverable in any part of the peritoneal covering. An incision was made through this membrane, which exposed the body of the child. It also brought into view a longitudinal laceration of the cervix and part of the body of the womb, the remaining portion of this side of the organ being uninjured. The child was then removed, and the head, which had partially entered the brim of the pelvis, was discovered to be hydrocephalic and of very considerable size.

The uterus, as already stated, was not much contracted; its parietes were softer than I had ever before witnessed in cases of laceration. The edges of the wound were ragged, but no appearance of bruise or gangrene was discovered. There was only a small collection of coagulated blood found in the cavity of the womb, amounting to three or four ounces; but under the peritoneum and anterior to the body of the child there was a diffused clot, thicker in some parts than in others, according as it was situated on a prominent or hollow part of the fœtus. It in quantity would most probably amount to twelve ounces.

The lowest portion of the cervix and os uteri were not implicated in the rent; the placenta was situated on the left side of the uterus, to which it was completely adherent. The pelvis, on examination, was found of standard dimensions. The bladder was empty, but was perfectly entire.

The records of medical science furnish no case bearing the

least analogy to the one here detailed; and, indeed, the possibility of such an event as rupture of the womb, and an escape of the fœtus from its cavity without passing through the peritoneum, has been denied. In making this statement, I am aware that writers speak of cases in which the muscular structure of the uterus is lacerated without involving the peritoneal coat.

It will be quite obvious to the reader from the facts of the case of Hannah S—, that there will be no great difficulty to attribute the result to its proper cause:—the pendulous state of the abdomen, and consequently the altered axis of the womb; the hydrocephalic enlargement of the head of the infant; the early evacuation of the liquor amnii; the position of the woman, who in kneeling had the trunk bent forwards during the action of the womb; and, shall I add, a softening of the uterine structure?

The perforation of the fœtal head (which was discovered only by the post-mortem examination to be hydrocephalic) might in all probability have led to a more fortunate issue, but during the life of the patient this fact was not known. Speaking of the hydrocephalic head, it may be proper to state that its existence is not so easily ascertained as some writers would lead their readers to believe. Three cases of this description have come under my observation, and yet the indications which are stated to characterise this condition of the head were absent in all.

I should have extracted the child by an incision through the abdominal parietes, if I had been with the patient at the time of her death; but my absence and other circumstances induced me to defer the investigation until a more favorable period.

Case 16.—*Longitudinal laceration on the left side of the neck of the womb; recovery.*

On Friday, July 6th, 1832, I was requested to visit Mary W—, æt. 35, residing in a cellar under No. 6, Strand Street, out of Bridgewater Street. The abode of this poor creature was damp, close, and in every way

unsuitable as a habitation. I met my friends and hospital colleagues, Mr. Hunt and Mr. Stephens.

She was at the full time of her eighth pregnancy. Some of her former labours had been difficult, particularly the last, which was very protracted, and in which she was delivered by craniotomy.

Mrs. Langtree, midwife, had been called at four o'clock, a.m.; and when she arrived, she found labour had commenced between two and three o'clock, and was advancing slowly. The pains were slight and irregular, although the patient complained very much. The os uteri was undilated. At this time there was no sanguineous discharge.

Under these circumstances, Mrs. Langtree left her; but she was again summoned at seven o'clock. During her absence the pains had become very severe and very frequent. The os uteri was at this time a little more dilated, but its edges were still thick. The membranes had ruptured, and there was now some discharge of blood from the vagina. The head of the infant presented, and lay over the brim of the pelvis. Between eight and nine o'clock the case assumed a very different character: the labour-pains became suspended; her breathing very laborious and oppressed; her belly was now very painful, and was altered in its shape, on which account Mrs. Langtree applied a bandage. Her skin was pallid, and bedewed with cold sweat. The midwife, being alarmed with these symptoms, sent for Mr. Roberton, the surgeon of the week, who was absent from home. Mr. Stephens was, therefore, requested to attend. On his arrival at half-past ten o'clock, finding her in such a dangerous condition, he sent for Mr. Hunt and myself. At eleven o'clock we were present, and found her as before mentioned. She had also a sense of suffocation; her pulse was frequent and small; and her countenance had a very anxious expression. She had a violent fixed pain in the belly, especially on the left side, which was greatly aggravated by pressure. There was a total cessation of labour-pains, and, as before stated, the figure of the abdomen

was strikingly different from that which usually exists at this stage of labour; and there was also evidently a greater projection forward of the uterus than ordinarily observed, assuming the character of an anterior obliquity. I made a very careful vaginal examination, and satisfactorily ascertained that the dimensions of the brim of the pelvis were under the standard size, and that the head of the infant was loosely lying over this aperture. We concluded laceration of the uterus had happened, and that the best chance of recovery would be afforded to this poor creature by immediate delivery by craniotomy. Mr. Stephens then attempted to perforate the head of the infant; but he failed in consequence of its unsteadiness, although the greatest possible support was used by our extended hands being placed on the woman's belly. I then made a similar attempt, but was in like manner foiled. Upon pressure being made by the instrument, the infant instantly receded and passed into the abdominal cavity. I then passed my hand per vaginam, onwards through the laceration into the abdomen in search of a foot, which I readily found and seized, and I afterwards brought it down into the vagina and then fixed a fillet upon it. After steady tractive efforts had been made for a short time, the breech began to descend and was soon delivered; but when the arms came to enter the brim of the pelvis some difficulty was found, but the obstacle was soon removed. Great embarrassment was also experienced in attempting to adjust the position of the head, so that it might enter the pelvis as favorably as possible. The infant was of the average size. The placenta, which had also escaped into the abdominal cavity, was removed by Mr. Stephens. I now introduced my hand, and fully assured myself that no portion of intestine protruded through the laceration. During this exploration, I ascertained that the laceration was situated on the left side and a little anteriorly, and ran longitudinally from the os towards the fundus uteri. The exhausted state of the poor creature was so great, that we were afraid that she would sink before her delivery could be accomplished; but her fortitude and patience could

not be excelled. Some brandy-and-water was given to her at this time. Afterwards she considerably revived, and her countenance assumed a more comfortable and happy expression. A cordial anodyne draught was now administered. In the evening, her general condition was more comfortable than we could have reasonably expected. Her pulse was about 124; her countenance was composed; she had slept for some time. She had great pain in the abdomen, which was considerably increased by pressure; the lochial discharge was moderate; her bowels had not been moved; and as she had not passed urine, the catheter was introduced, and half a pint of high-coloured urine was drawn away. Two grains of calomel and half a grain of opium was ordered to be taken every four hours.

The next morning (Saturday, the 7th) we found the pain in the abdomen considerably increased. She had continued vomiting; her skin was very hot; her pulse had become quicker, beating 135 in the minute. From this date until the 11th, the symptoms were of that character which clearly proved there existed considerable inflammation in the peritoneum. They varied respectively in their intensity from day to day; and in order to avoid the tediousness of a daily report of the symptoms and treatment, I shall briefly remark that the case was seen twice a day at least, and was treated upon as active an antiphlogistic plan as the attendant circumstances warranted. The remedies used were of the following order:—She was bled from the arm three times, and the quantity of blood altogether taken amounted to twenty-six ounces; it was cupped and buffy. Twelve leeches were applied; a blister was applied to the belly. Calomel and opium in repeated doses; effervescent saline draughts and carbonate of magnesia; Sp. Terebinth. applied hot as a lotion to the abdomen; an anodyne stimulant liniment was applied to the belly; enemata with Sp. Terebinth.; catheterism, &c.

The bowels were not moved until the 8th (the third day after her delivery), when she had five very offensive evacuations, which afforded her great relief.

Wednesday, July 11th.—We found a fluctuant tumour in the hypogastrium, which we considered to be an abscess. This tumour continued to become more prominent, and as it progressed it more decidedly assumed that character. The catheter was required to be frequently passed, and on different occasions the urine which was drawn off evidently contained pus. At different times during her confinement, the nervous system was much excited in consequence of the brutal conduct of her husband. With other emotional excitement she had attacks of hysterical convulsions. If she had received kind conjugal treatment, she would have been much better at this period.

As her present symptoms appeared to depend on irritability and debility, a more generous diet was ordered, and she was directed to take repeated doses of the acetate of morphia. On the 16th I was urgently requested to visit her on account of her great exhaustion, which had been produced by excessive and continued vomiting. Ammon. Carb., &c., were prescribed; sago and gruel with a little brandy were given. The swelling in the hypogastrium was much reduced in size; pus still existed in the urine, and some was also discharged per vaginam. She still continued to be very irritable and weak, and had an attack of diarrhœa. Her mouth and throat became aphthous. These symptoms were removed in a few days by the usual remedies—Borax, Creta Pulv., Hyd. c. Cretâ, &c. She was ordered to take tonics and a generous diet; and after continuing this plan for a short time her health began to improve, and ultimately she perfectly recovered.

Remarks.—The recovery of this poor creature after such an accident is really wonderful, when the contingent circumstances of the case are considered. She had to struggle against all the deprivations of poverty; the mischiefs arising from an ill-ventilated, damp cellar; and, not the least, she had to endure all the effects which must necessarily arise from the brutal usage of her drunken husband.

The time between the commencement of the labour and the occurrence of the laceration was very short, not being

more than six hours; but the interval between this event and the discharge of the liquor amnii was very much less than that just stated. The membranes ruptured during the absence of her midwife, which probably might be at about from two to three hours before the accident happened.

The cause of the laceration is, doubtless, in a great measure traceable to the diminution of the antero-posterior diameter of the pelvis; but there also existed here some degree of anterior obliquity of the uterus. We find that in the early part of the labour, when the pains were very slight, they were irregular and most likely of a spasmodic character, and the patient complained very much of them.

The laceration took place not very long after the accession of strong pains, at which time the os uteri was only partially dilated, and its margin was thick. The head of the infant had not as yet engaged itself in the brim of the pelvis. There were several contingent circumstances which, no doubt, contributed to a propitious result: first, the labour was short, and the interval between the discharge of the liquor amnii and the occurrence was very much shorter, so that the tissue of the uterus could not possibly be contused, or its vitality injured. The rent must therefore be a clean division of structure, its character being something like an incised wound. Again, its longitudinal direction was favorable, inasmuch as its length must be much more diminished by the after-contraction of the uterus than if it had run transversely. I am at a loss to say where the abscess was exactly situated, but it terminated very satisfactorily, leaving no fistulous opening between the bladder and the vagina.

This poor woman has been pregnant twice since her recovery from the serious uterine laceration which happened in her last labour, and which forms the subject of the preceding observations. I was informed by Mr. Stephens that the first of these two pregnancies did not advance far before abortion took place. In the second of these two pregnancies, which occurred in the year 1834, she arrived at the

seventh month. Mr. Stephens, having been informed of her condition, concluded to call a general consultation of the surgeons of the Lying-in Hospital to consider the propriety of inducing premature labour, in order to lessen the hazards consequent on a greater development of the uterus, and also to afford a better chance of the head of a seventh-month infant passing through the brim of the pelvis.

Both Mr. Stephens and Mr. Hunt, who were present at the consultation, informed me that it was concluded to adopt this measure. Mr. Stephens therefore induced labour as decided upon by the consultation, and he had the sole and individual management of it. He informed me he had great difficulty in recognising the os uteri. He also stated that the labour was very tedious, and that he felt the cicatrix. The infant was dead. After the completion of the labour, the patient was very ill, but was soon restored to health by the measures adopted by Mr. Stephens.

CASE 17.—*Longitudinal laceration of the uterus; fatal.*

The particulars of the following case were communicated to me by my friend Mr. Clough for publication:—"Ann K—, æt. 37, whose health was generally good; but she was apparently of rather a lax fibre. She was now pregnant of her tenth child. The labours have been generally tedious, and in three of them the children were born dead; but there had not been any necessity for either manual or instrumental assistance during any of them. At nine o'clock in the evening of November 8th, 1832, she began to have slight pains, the membranes having spontaneously ruptured the night previous; but up to the hour mentioned she had been able to do her ordinary house-work. The pains continued to be slight until one o'clock a.m., when Mrs. Taylor, the midwife, was sent for. She stated that at two o'clock she found the cord presenting. When I saw her at three o'clock, it had become cold and pulseless. The os uteri was now fully dilated, and the head of the infant had partially entered the brim of the pelvis. At this time the pains were good, and the action of the uterus was such as seemed likely

soon to effect delivery. I tried to place the cord so as to receive as little pressure as possible; but, from its cold and flaccid state, I did not consider myself called upon further to interfere, as I had no doubt the infant was dead. The woman's pulse was about 94, and soft; I therefore left her fully expecting she would shortly be naturally delivered of a dead child. At half-past seven o'clock the woman was very ill, and therefore the midwife again sent and desired me to come. I inquired from the messenger whether the pains had been active, and the reply was that the pains had left her altogether. I sent Mr. Whitehead to ascertain her condition; and on his return he informed me she was dying, and before I arrived at the house she had expired. I examined the bed and vagina, but there did not appear to have been any hæmorrhage whatever. I also examined the uterus through the abdominal parietes, and could not discover any very striking irregularity in this organ. It had in general the regular circular protuberance, excepting on the left side, where there seemed to be a very slight projection, and at this spot some portion of the fœtus could be rather more distinctly felt.

Post-mortem examination.—On opening the abdomen, the uterus was observed to be lying considerably to the right side; and on the left side, a little anteriorly, there was an enormous blackish-looking tumour, which was caused by the peritoneum being distended with coagulated blood. This sanguineous effusion had taken place under the peritoneum, and greatly distended this membrane, extending under it as far as the right psoas muscle; it had also distended the broad ligament. The round ligament was seen tightly stretched over this swelling. In one part the peritoneum was torn to about the extent of one and a half to two inches, and through this the bag of the membranes protruded, in which was contained one elbow of the infant. On enlarging this opening, it was seen that the muscular structure of the uterus was torn to the extent of four or five inches, and that the infant lay in the laceration, being only covered by its membranes and the peritoneum. The infant's face lay

towards the left acetabulum, its left ear almost opposite the pubes, and on the left parietal bone there was a large indentation caused by pressure. There was (besides the effused blood already mentioned) fully two pounds of blood in the abdominal cavity. All the viscera and the other tissues were nearly completely blanched. The antero-posterior diameter measured about three inches and three quarters; the transverse was of the average dimension. There was a considerable tumefaction of the joint of the pubes, as if its interarticular cartilage had been forced out. When the pubes was removed, a considerable movement was allowed, which permitted their separation to the extent of two lines.

The principal and most remarkable feature of this case is, that the action of the uterus was not so great as to be likely to produce a rupture of its fibres; indeed, the pains, the midwife informed me, were slight, nor was there at any particular period of the labour any severe or sudden pain to indicate the time when the laceration happened. A sudden and unaccountable alteration in the appearance of the patient came on, after which she rapidly sank. There was not any vomiting; there was not any escape of the contents of the uterus, except a slight protrusion of the membranes through the laceration.

The pelvis was slightly contracted in its antero-posterior direction; and the symphysis pubis had a hard projection internally, not very prominent."

Remarks.—The above case is detailed as nearly as possible in Mr. Clough's words, but there are two or three important circumstances in the case upon which I shall make a few observations.

The extraordinary collapse which happened, and the very rapidly fatal termination, must be referred to the large effusion of blood, superadded to the great shock which must be sustained by the nervous system. In this case the peritoneum was only lacerated to a very small extent; yet there was a larger discharge of blood in this, as there was also in two other cases in which the peritoneum was not

torn at all, than I have found in most of the other cases in which this membrane had been torn.

It is not a little extraordinary that the pains all along were so very trifling in this case; consequently we must inquire for some other cause rather than the powerful contractions of the uterus, upon which this accident depended. The brim of the pelvis was "slightly contracted in its antero-posterior direction; and the symphysis pubis had a hard projection internally, not very prominent." In order to judge rightly whether this slight projection had any injurious influence, we should first ascertain in what situation the laceration occurred, and also what parts were involved. If this slight projection had acted injuriously, the mischief must have been inflicted on the anterior and central portion of the cervix uteri, and it is more than probable that the bladder must also have been included in the injury; but we do not find that either of these two states existed. Was the contraction of the pelvis alone sufficient to cause the accident? Certainly not, in my opinion; for we well know that protracted labour may continue for a much longer time and be accompanied by much stronger pains than Mr. Clough mentions to have occurred in his case, and yet no injury has happened in such instances. But this state of contraction of the pelvic aperture in conjunction with a changed condition of the structure of the cervix uteri is quite adequate to have produced this accident, notwithstanding the uterine contractions were feeble.

It appears to me that softening had taken place; and this opinion is confirmed by the statement of my valued friend and partner, Mr. Hunt, who was present at the post-mortem examination. He says—"The uterine structure surrounding the laceration appeared softened, broken up, and loose in its texture."

CASE 18.—*Longitudinal laceration of the neck of the uterus; recovery.*

Elizabeth J—, residing at 47, Great Ancoats Street æt. 28, pregnant of her eighth child, sent for Mrs. Heyes,

midwife, on Wednesday night, at eleven o'clock, May 29th, 1833, and at half-past twelve o'clock the membranes ruptured. When Mrs. Heyes first saw her, she found the pains were very trifling; but at two o'clock on Thursday morning, May 30th, she sent for me on account of a considerable hæmorrhage which began about an hour before. Mr. Bird, my assistant, went to see her. On his return, he reported her to be in danger. I immediately visited her, when I found the discharge had ceased. The os uteri was dilated to about the size of a dollar, and further dilatable. Its posterior lip was œdematous. The head of the infant was naturally placed, and was just entering the brim of the pelvis. Her pulse was 80, and perfectly distinct. As the urgency of the case had now (five o'clock) passed off, and as no means could be safely adopted to deliver her (except by craniotomy), it being quite impossible to use the long forceps, I determined to wait. I then left her, with a strong injunction to the midwife that I was again to be apprised at eight o'clock if the labour had not terminated. I was now informed that this poor woman had been delivered by instruments (kind not known) in one of her former labours. Mrs. Heyes had attended her during her last two confinements, the first of which was rather a quick labour, Mrs. Heyes being with her only three hours. The infant was born alive, and was a female and small in size. In the last of these two labours (being that preceding the present one) she was three days in labour, and the child (a male) was stillborn. I did not hear again until eleven o'clock, when I found her in a very dangerous state. I was informed that her labour had been (during my absence) slowly proceeding, and the pains had been very slight until ten o'clock, when they became rather sharper and more crampish in their character. At this time she was seized with a pain which was most violent and agonising, and was accompanied with a shrill exclamation—"Oh, my belly!" A slight sanguineous discharge ensued. When I now saw her, I found her countenance collapsed and exceedingly pallid; she had vomited, and complained of crampish

pains in the belly. Her pulse was very quick (about 140) and very feeble. She had great abdominal tenderness; the sanguineous discharge above mentioned had now ceased. I ascertained that the head of the infant was lying more loosely over the brim of the pelvis than it did when I visited her in the early part of the morning. I decided upon immediate delivery by craniotomy, and Mr. Dick, who was present, steadied the uterus whilst I passed the perforator. But no sooner had the instrument come in contact with the head than this part of the infant, as well as its entire body, immediately receded out of reach. After I had withdrawn the instrument, I introduced my hand into the uterus, and then, through the lacerated opening in this organ, into the abdomen, and searched for a foot. I soon found one, and brought it down. The pulse was now very weak, and the patient was much exhausted. Some brandy-and-water was administered. After resting a short time, the delivery was accomplished, although some little difficulty was experienced in bringing the breech and shoulders through the brim of the pelvis, which was found much greater when the head came to pass through this aperture. The infant was a female of the ordinary size, and was extracted without instrumental aid. Having again introduced my hand, I found the placenta lying loose amongst the bowels in the abdominal cavity, and brought it away. I now endeavoured to ascertain the character of the wound and its situation, and also to learn the precise measurement of the pelvis. During this exploration, I discovered that a portion of the intestine had passed through the laceration, and downwards into the pelvic cavity, which I immediately carried up and returned into the abdomen. The wound was situated on the left side a very little forwards, and ran longitudinally. Its edges, as far as I could ascertain, were uniformly equal or appeared to be so, and approached to the character of an incised wound. The pelvis was originally under the standard size, and it was likewise contracted in the antero-posterior diameter, which measured about three and a half inches. She bore the operation with great fortitude, but she was very

much exhausted. The uterus had contracted as much as is usually found to take place in these cases, and there was not more sanguineous discharge than occurs after ordinary labour. An opiate was now given. The necessity of great care was impressed upon the attendants. She took some gruel with a little brandy. At five o'clock the same evening, I met in consultation my respected friends and hospital colleagues, Dr. Hull, Mr. Hunt, and Mr. Stephens, and had the benefit of their valuable opinions during the after-treatment of this case. She was visited two or three times a day according to the urgency of the symptoms for a considerable time. At this visit we found she had slept; her pulse was 120; her countenance was composed; her belly was generally tumefied and tender to the touch; her tongue was white and moist. She was lying on her back, with her legs drawn upwards; the lochia natural. She had not passed urine. At a subsequent meeting this evening the catheter was passed; and an opiate pill with calomel, an antiphlogistic diet, and a saline medicine were ordered.

From Friday, May 31st, to June 3rd, inclusive, the symptoms were those which clearly indicated peritoneal inflammation, varying in number and intensity from one day to another: great pain in the belly on pressure, great thirst, a white furred tongue, constipated bowels, hot skin, and frequent vomiting.

The treatment was antiphlogistic:—Calomel and opium; castor oil with spirit of turpentine in enemata were occasionally administered; Spir. Terebinth. as a lotion was applied to the belly. Venæsectio ad ℥xvj. The blood drawn was very much cupped and buffy. Cataplasms and leeches to the belly. As the bowels had not acted, purgative pills were given, which were effectual in unloading the bowels of scybalous stools. Sinapisms were repeatedly applied to the pit of the stomach.

From the last date to June 10th nothing of great importance occurred. She had a cough, and her bowels had now become too open. Astringents, demulcents, and a blister to the chest were ordered.

On Monday her cough was troublesome; her pulse was 96; slight diarrhœa still continued; and she complained of a violent throbbing pain in the vagina. Upon examination, I found a swelling, which it appeared to me would prove an abscess, and which turned out to be so. It broke, and sanious matter was discharged the next day. She was ordered an anodyne draught; to continue her astringent mixture, and to have warm water frequently injected into the vagina.

From this date to June 13th, the symptoms were irritation in the bowels, colicky pains, and shivering. She was ordered hot poultices and an anodyne stimulating liniment to be applied to the belly; to take opiate pills with rhubarb, and to have an opiate enema. She complained of a burning sensation in the vagina, and said, "The stools are discharged through this canal." On examination, I found the vaginal membrane very red, and liquid stools trickling along it. I passed a pipe into the rectum, but I failed to detect the opening by a finger passed into the vagina. She was generally better, but suffered very much from the burning pain in the vagina and in the vulva, which was doubtless greatly aggravated by the acid character of the liquid green stools which were continually discharged from this part. Ordered opiate draughts and an astringent cretaceous mixture to be taken, and diligent ablution with warm water, and linseed infusion to be injected into the vagina. I afterwards discovered that the fistulous opening was situated at the upper part of the vagina just below the os uteri. The feeling conveyed to my finger was as if the surrounding part was disposed to close. It was afterwards found considerably diminished in size.

From this time forward all the symptoms continued to improve, and the bowels were restored to healthy action. The irritable and inflamed state of the vagina gradually subsided; the discharge of fæcal matter through this passage diminished; and, happily for this poor creature, the recto-vaginal opening had completely closed, and the natural

course of the fæces per anum was established long before I discontinued my attendance.

The medicines prescribed since the last date were injections, demulcents, astringents, and tonics, and were continued as long as they were necessary.

This poor woman, like the other who recovered, had to endure the deprivations of poverty during her pregnancy; and, after the occurrence of the serious accident, she depended for support on the kindness of a friend. Her tenement was much better than that of the other patient.

She has been pregnant four times, and all her labours have been premature.

The first labour took place on the 20th of May. It was very tedious, being thirty to forty hours. The infant, of six months, was born dead. She had slight flooding, but it was soon suppressed.

Her second labour occurred June 14th, 1835; and, after forty hours' duration, a six months' infant was born dead.

On July 2nd, 1836, she was a third time delivered of a six months' infant, stillborn.

In her last labour (at the end of 1837) the hand presented, and Mr. Hunt was sent for. He reduced the hand and arm above the head, after which it (the head) came down into the pelvis. After a few hours' duration, she was delivered of a living seven months' male infant. She recovered.

The infant last born continued to live, and most likely he arrived at manhood, as Mr. Hunt saw him when he was fourteen to fifteen years of age.

During the intervals of some of her pregnancies she had attacks of peritonitis, for which Mr. Hunt kindly attended her. She ultimately became an inmate of the Manchester Workhouse, and died there of phthisis.

The body was inspected by Mr. Hunt, in the presence of Dr. Francis and myself. There was not the slightest trace of any cicatrix in the womb to be seen. The only morbid result was a band of slight adhesion between this organ and a portion of the ilium.

Remarks.—The recovery of this patient after such an accident, and her safe delivery after four subsequent labours, is really astonishing.

The history of this case must bring conviction to every reflecting mind of the wonderful resources of nature. The duration of her labour, from its commencement to the occurrence of the accident, was twenty-four hours. The membranes had ruptured twenty-three hours before.

There is no evident cause to account for the occurrence of the laceration but the diminution of the antero-posterior diameter of the brim of the pelvis.

The labour had been slowly advancing for a great portion of the time, during which the pains were very weak. At ten o'clock a.m. (not an hour before the accident happened) they became strong and decidedly crampish. The mode of its occurrence had most probably considerable influence on her recovery. It was sudden and immediate after the access of strong uterine action, and therefore it may be fairly inferred that the uterine tissue had not sustained any considerable injury from the contusion by the head of the infant against the bones of the pelvis. The wound was a clear division of the part, like an incised wound, and therefore favorable for the healing process; and there is no doubt there was a freedom from softening.

The spontaneous occurrence of premature labour in all her last pregnancies proves that the uterus was indisposed to be distended beyond a certain range. These results clearly show that in cases in which laceration of the uterus has occurred, premature labour should be induced in subsequent pregnancies, as a means of preventing a repetition of this serious mischief.

CASE 19.—*Longitudinal laceration of the cervix and part of the body of the uterus on the left side; fatal.*

I am indebted to my friend Dr. Stephens for the following very interesting case:

"On December 2nd, 1838, I was called about eight

o'clock in the morning to consult with a friend on a case which he was then attending. The patient was a weakly, delicate woman, labouring under hemiplegia on the left side, which had existed for several years. She had passed through the entire period of pregnancy without any remarkable symptoms having occurred, with the exception of having great tenderness in the abdomen.

"Her medical attendant was called to her at four o'clock this morning, and found her labour slowly advancing until about six o'clock, at which time the os uteri was about the size of a crown-piece and did not feel firm. The pains were of a lingering character, and were not severe. Without any previous notice, a remarkable change now took place. She became very pale and faint, and she had a slight discharge of blood per vaginam. The pains became very trifling and inefficient, but were more continued, and were accompanied by much moaning and complaint. I found her very pale; her lips were blanched; her extremities were cold; her pulse was very small, weak, and quick; she had a profuse cold perspiration; her breathing was laborious; her countenance was anxious; she vomited a brown coffee-coloured fluid, and there existed some jactitation. The belly was a little tumid, and there was felt a fluctuation in it. The os uteri was fully dilated, and the head of the infant had advanced into the cavity of the pelvis. Believing that some serious internal mischief had taken place, most likely laceration of some portion of the uterus, yet we had no evidence that such an event had happened further than the serious nature of the symptoms indicated. The position of the infant remained unchanged in the uterus; we therefore decided upon immediate delivery, which was undertaken by my friend with the forceps, and accomplished without any difficulty. The child was dead. The sinking afterwards rapidly increased, the jactitation became quite incessant, and she died in about half an hour.

"*Post-mortem examination.*—On opening the abdomen, we found an enormous effusion of blood in this cavity. On raising the uterus, there was seen an extensive laceration of

the cervix and part of the body of this organ, which was situated on the left side, and taking a longitudinal direction. The edges of the wound were darker coloured than natural, and, as well as the surrounding tissue, were evidently softer and thinner than the structure is ordinarily found. The diameters of the pelvis were of an accurate or normal measurement; and there were no inequalities, projection, or sharp edges on any part of it. This was her sixth labour."

Remarks.—This case affords another example of laceration of the uterus happening without the least premonitory sign. In fact, there was less evidence of the time of its occurrence than is in general found. There were two causes to account for the great prostration—the loss of blood, and perhaps, in some degree, 'shock.' The absence of agonising pain at the time of the accident was most probably owing to the gradual manner in which the injury took place, and from the softened, thin, and weak state of the tissues.

A few General Remarks and Conclusions.

Of the 19 cases, the age of the patient is only registered in 11 cases, as follows:

In 1 case 21 years.	In 1 case 36 years.
In 1 „ 28 „	In 1 „ 37 „
In 1 „ 30 „	In 2 „ 39 „
In 1 „ 35 „	In 3 „ 40 „

No practical deduction can be drawn from this table; it only shows that in the greatest number this accident occurred at the more advanced ages—as 39 and 40.

The number of the labours which each woman underwent is recorded in 17 cases, and stands thus:

In 2	cases	it was	the 1st	labour.
In 2	„	„	2nd	„
In 2	„	„	4th	„
In 1	„	„	5th	„

In 2	cases	it was	the 6th	labour.
In 1	„	„	7th	„
In 4	„	„	8th	„
In 1	„	„	9th	„
In 1	„	„	10th	„
In 1	„	„	11th	„

The above table shows that laceration of the uterus occurred most frequently in women pregnant for the eighth time, and that to those pregnant for the first time the accident happened quite as often as it did in any of the other cases which are registered.

The duration of the labour, from its commencement to the occurrence of the laceration, is given in 17 cases, as follows:

In 1	case	it was	from 3 to 4 hours.		In 2	cases	it was	12	hours.
					In 1	„	„	24	„
In 2	cases	it was	6	hours.	In 1	„	„	26	„
In 1	„	„	8	„	In 3	„	„	30	„
In 1	„	„	9	„	In 1	„	„	35	„
In 3	„	„	10	„	In 1	„	„	72	„

The greatest number of accidents is here shown to have happened when the labour had lasted 10 and 30 hours.

The duration of the labour, from the time the membranes ruptured to the occurrence, is mentioned in 17 cases:

In 1	case	it was	2	hours.	In 1	case	it was	23	hours.
In 1	„	„	3	„	In 1	„	„	24	„
In 2	„	„	4	„	In 1	„	„	25	„
In 1	„	„	7	„	In 2	„	„	27	„
In 2	„	„	8	„	In 1	„	„	30	„
In 1	„	„	16	„	In 1	„	„	36	„
In 2	„	„	18	„					

We find the greatest number of accidents happened in those cases in which the membranes ruptured at 4, 8, 18, and 27 hours; 2 cases having happened at each of these dates. At all the other dates the number is equal.

Statement of the Causes or Conditions in which the Cases of Laceration of the Uterus happened.

In one case it was the result of protracted and neglected labour, in which the infant presented transversely.

In one case a schirrous hardness existed in the os uteri as the only appreciable cause of the injury.

In one case excessive size of the infant, with a softened state of the uterine tissue.

In one case turning performed, with the os uteri firm and undilated.

In one case there existed a large hydrocephalic head of the infant, and a great degree of anterior obliquity of the uterus, and a softened state of the tissue of this organ.

In one case there was no apparent cause, except an anterior obliquity of the uterus.

In two cases softening of the uterine tissue was the sole cause.

In one case a very extreme degree of distortion of the pelvis.

In one case there was a considerable degree of distortion of the pelvis, thinness and, most probably, also softness of the uterine tissue.

In nine cases the brim of the pelvis was slightly contracted. In one it measured two and three quarter inches; in two, three inches; in two, three and a half inches; in two, three and three quarter inches; and in two the dimensions are not stated. In two of these cases there was a slight exostosis at the symphysis pubis; in two there was also softening; and in four there was a contused state of the uterine tissue.

In five cases (out of the entire number) in which softening of the uterine tissue existed, there were two in which there was no other apparent cause; in one it was conjoined with another cause—an excessive bulk of the infant; in one with an hydrocephalic head; and, as above stated, in two cases in which the pelvis was contracted.

In the eleven cases in which there existed distortion of the pelvis, there were two which were generally affected by malacosteon, one of which was extremely distorted, the other not to so great an extent. In the remaining nine cases the brim alone was slightly contracted.

From these data, although limited, we may conclude that laceration of the uterus happens more frequently when slight contraction of the brim of the pelvis only exists, than when there is great distortion of the entire pelvis. The difference in the result in these two cases may be reasonably and, I think, truly attributed, first, to the varied position which the uterus assumes during labour in two such instances.

When the form of the pelvis is only slightly contracted, the os and cervix of this organ partially descend during labour into or a little through the aperture of the pelvis, so that, as the head of the infant is forced down, the uterine tissues become fixed between this body and the pelvic bones. The fixity of this structure actually forms a *point d'appui* from which the uterine fibres during contraction forcibly pull; and the great probability is, that sooner or later the tissue either directly tears, or, being first contused and softened, yields.

Secondly, when labour is protracted from slight disproportion between the brim of the pelvis and the infant's head, the patient is usually allowed to remain out of bed and to walk about in the earlier part of labour, which is always a very hazardous practice when there exists any mechanical impediment to the passage of the head, such as we are now considering. But in cases of labour protracted from an extreme distortion of the pelvis, the os and cervix uteri are always situated above the brim. The uterus assumes a retort shape, and its body and fundus lie upon the thighs of the patient,* and therefore its mouth and neck do not enter or pass through this aperture. The patient is, from necessity, confined to bed; so that the uterine tissue is not exposed to the same effects of gravity,

* See Cases in my 'Observations on the Cæsarean Section,' &c.

nor to the vice-like fixture, as it is when the pelvis is more limitedly contracted. It must not be understood that I mean that laceration of the uterus is not likely to occur in labours protracted from great pelvic distortion; on the contrary, there are two cases related in this paper—one extreme, the other moderate—in which this accident took place, and which, indeed, will happen in most of such cases if the patients are not delivered.

The situation of the laceration in 18 cases is as follows:

In 1 case	the cervix was torn	anteriorly.	
In 2 cases	,,	posteriorly.	
In 6 ,,	,,	on the left side.	
In 4 ,,	the cervix and body were torn	anteriorly.	
In 3 ,,	,,	,,	on the left side.
In 1 case	,,	,,	on the right side.

In one case there were three circumscribed injuries of the size of a shilling to that of half-a-crown about an inch apart from each other in the cervix.

The cervix is the part of the uterus most frequently lacerated, and sometimes the body of the organ is implicated as well, and in both instances the injury is generally found on the left side.

In 11 cases	the laceration	was	longitudinal.	
In 3 ,,	,,	,,	transverse.	
In 3 ,,	,,	,,	oblique.	
In 1 case	,,	,,	circular.	

In 16 cases the muscular tissue and the peritoneum were both torn.

In one of these cases the peritoneum was only torn to the extent of one and a half to two inches. An immense effusion of blood was found in the abdominal cavity.

In two cases the peritoneal coat of the uterus was uninjured, whilst the muscular tissue was extensively torn. There was in both these cases an immense effusion of blood under the peritoneum.

These two cases are (each of them unique) especially

(Case No. 15) worthy of consideration, inasmuch as all writers upon the subject, as far as I know, are unacquainted with the facts contained in this case. We learn from it (Case 15) that the muscular structure may be very extensively lacerated, and the peritoneal coat lifted up, and yet not the smallest breach in its continuity be made.

Dr. McKeever could not be aware that such an event could possibly happen. This writer knew that the peritoneum might escape injury, but he certainly did not know that it was possible for the infant to pass out from the uterine into the abdominal cavity without this membrane being torn as happened in this case.

In both these cases there was great vital depression, which partly, doubtless, depended on the effusion of blood which took place under the peritoneum. In one of them (No. 15) the shock was so great as instantaneously to extinguish life; a result which I have never known before, notwithstanding that my long connection with the hospital has furnished me with frequent opportunities of witnessing instances of lacerated uterus besides those which are related in this paper.

Of the 19 cases three recovered, or nearly sixteen to seventeen per cent.; but although this is a small proportion of successful cases compared to those which proved fatal, still it bears a favorable comparison with the aggregate results of the cases which have been published.

The mortality which takes place in this accident, as shown by published cases, it is to be feared would be greatly increased if all those instances in which this injury has occurred were brought to light.

When we contemplate the frequent fatality of laceration of the womb, we are led to inquire whether there are no symptoms which show themselves as universal precursors of this dreadful catastrophe? And if there are, are we possessed of the means of prevention? The answer to these questions most certainly is that we do not possess that knowledge which would warrant us in adopting measures requisite to accomplish this object. If we were, without

great prudence and matured judgment, to act upon our limited knowledge of the preliminary symptoms, the catalogue of mortality might be greatly increased.

In all the cases now brought before the Society there are not to be found any premonitory symptoms *which of themselves* would warrant an operative measure being taken in order to avert the impending danger. But in most of them there was the most unmistakeable evidence that some serious internal lesion had taken place; but in others of them there was not the least sign that such mischief had happened. Notwithstanding the truth of these remarks, we should carefully consider all the contingent circumstances of protracted labour, and especially of those which are prolonged by mechanical impediments, and whether they are produced by relative disproportion of the capacity of the pelvis to the size of the head of the infant; and should adopt measures of timely delivery.

We should also recollect the mischievous influence of the erect position during labour, and guard against it by keeping the patient horizontal, not only in those labours in which there is an anterior obliquity of the uterus, but in all others in which we cannot satisfactorily prove to ourselves what is the cause of protraction. We have seen that softening of the uterine tissue existed in several of the foregoing cases, and therefore we ought never to forget that weak pains may be owing to weak organization. In all cases, therefore, in which the labour lingers for want of strong pains, we ought to investigate the cause of weak uterine action, and judiciously supply timely assistance.

Irregular or spasmodic pains misled in some of the foregoing cases; and, therefore, in all cases in which we find them occurring, it is highly expedient to watch carefully the case and to endeavour to discover the cause, and then to adopt suitable means to subdue irregular and promote regular action. In some cases of this kind artificial delivery may be required.

Dr. GRAILY HEWITT remarked upon the great value of Dr. Radford's paper. There was one part of it, however, to which he must refer, and that was the antiphlogistic treatment which had been adopted. He would venture to say (without any disrespect to Dr. Radford) that the antiphlogistic treatment would not be countenanced by many authorities present. There was a notion some years ago that antiphlogistic measures were necessary in all cases of inflammation; but happily that notion was exploded. He (Dr. Graily Hewitt) could not speak in too high terms of the peculiar claims of Dr. Radford's paper as tending to a more accurate diagnosis of these cases. In cases of rupture of the uterus, though the lesion is so great, there is an absence of the uniformity of the symptoms. With respect to Dr. Radford's opinion of the necessity for early artificial aid in these cases, he thought the Society could not too strongly endorse that opinion. One great cause of rupture of the uterus was the delay in the delivery of women. Dr. Graily Hewitt related a case of concealed hæmorrhage in which the symptoms were closely allied to rupture of the uterus, thus showing the difficulty in diagnosis.

Dr. PLAYFAIR did not approve of the treatment which Dr. Radford had adopted in those cases where the child had escaped into the peritoneal cavity. He believed that if we attempt to draw the child through the rupture it would tend to increase the laceration, which is most undesirable, and we also run the risk of injuring other abdominal organs. A much better method of treatment would be that of gastrotomy, as practised in America. He had known twelve cases where this operation had been performed, and some of these cases had done well; in fact, the results of this operation were satisfactory. In one case the operation had been performed twice. He was surprised that this practice was not taught in the text-books.

Dr. J. BRAXTON HICKS entirely agreed with the remarks of Dr. Playfair, but he was in error when he said that all the text-books recommend the re-dragging the fœtus through the rent where it had escaped into the peritoneal cavity; for in 'Holme's Surgery' he would find that he (Dr. Hicks) had advocated gastrotomy, and otherwise discussed the question. He considered that cases of ruptured uterus were not so rare as supposed, it being very probable that some cases recovered without any suspicion being entertained of their existence. He thought that occasionally one cause of rupture of the uterus might be from the tension produced by effusion of blood between the placenta and uterus, where the margin remained attached, as in the cases of concealed accidental hæmorrhage he had recorded in the 'Transactions of the Society.' In one of them the peritoneal coat had been ruptured by the great strain, and this accident had been noticed by another observer. It was possible, therefore, that the muscular coat might give way

also, and thus the blood, and perhaps the fœtus, be effused into the peritoneal cavity. He threw this out as a hint, because, in the greater number of the cases he had seen of ruptured uterus, labour had only just begun. As a preventive measure the use of chloroform was of very great service, especially in operations, in mitigating the uterine contractions, particularly irregular kinds, and thereby rendering the uterus less liable to rupture spontaneously or traumatically.

Dr. EASTLAKE called attention to one point in the diagnosis of rupture of the uterus which had not been noticed by Dr. Radford, viz., the data furnished by auscultation. The fœtal heart sounds became inaudible after the rupture. This condition Dr. McClintock insists upon strongly.

Dr. BARNES said, as Dr. Radford, through indisposition, was unable to be present, it might not be inappropriate if he took his place, and offered a few observations. With respect to the causes of rupture, no doubt that the first great cause was protracted labour, and the great object to be had in view was to remove the obstruction as speedily as possible. A second cause was rigidity of the os uteri. Dr. Radford had seen the necessity of incising the os uteri, and had done so. He (Dr. Barnes) had frequently had occasion to incise the os, and the operation had been followed by the best possible results. A third cause was the obliquity of the uterus. This admits of the uterus being jammed in the pelvis; the rupture in these cases having the appearance of a contused wound with loss of substance. A fourth cause is, when there is a dead child. The dead fœtus does not possess the resiliency that a live fœtus does, and consequently is not able to take the requisite turns in the pelvis. A fifth cause is disease of the uterine tissue. Under this head we may recognise two kinds of softening of the uterine structure—one where there is softening dependent upon degeneration of the uterine structure, which occurs before labour, and the other, which is produced by the pressure of the head against the pelvis during labour. With respect to Dr. Playfair's observations, he (Dr. Barnes) remarked that Dr. Radford had in one or two cases urged the propriety of resorting to gastrotomy; but it had been overruled by others. He would remind them that their late president objected to any operative measures whatever when the fœtus had escaped into the abdominal cavity. He had seen a case where it had been left, and the woman recovered. Dr. Barnes thought this was a strong point in his favour. Dr. Barnes observed that there was a great similarity in the symptoms of concealed hæmorrhage and rupture of the uterus.

Dr. WILTSHIRE asked if the degeneration of the uterus was not owing to the poorness of the living of the patients amongst whom this fatal accident occurred.

Dr. BARNES did not think so. He had seen cases where rupture had taken place when the patient had always lived well.

Dr. BRUNTON observed that the cases which Dr. Radford had collected were attended by midwives. He knew that midwives were in the habit of giving very large doses of ergot of rye. He believed that this was one great cause of rupture of the uterus. This drug brought on irregular action, and, when violent, it often resulted in rupture, and when it did not cause rupture we often get a retained placenta owing to the irregular contraction of the uterus.

PLATE II

Represents the anterior view of the pelvis mentioned in Case 4, with a portion of the spinal column.

PLATE III

Represents the same pelvis reduced and seen from below.

nat. size.

Dr Westmacott del.

W West lith.

JUNE 6TH, 1866.

Dr. BARNES, President, in the Chair.

Present—47 Fellows and 7 visitors.

The following gentlemen were *elected* Fellows of the Society:—Dr. P. Boulton, 23, Harewood Square; Mr. A. G. Chattaway, Leominster; Dr. R. C. Croft, Camden Road; Dr. Maddever, Rothesay; Mr. A. L. Peacock, Devonshire; Dr. Tannahill, Glasgow; Dr. Yeaman, Glasgow. *Proposed.*—Dr. Coombs, Bedford; Mr. J. Grosjean, Sheffield Gardens; Dr. H. Mackintosh, Brompton Row; Dr. John Thompson, Bideford, Devon; Dr. Disney Thorpe, Birmingham. *Admitted.*—Dr. Rugg, Dr. H. C. Andrews, Dr. Loane, Mr. J. H. Bryant, and Mr. Sequeira.

Dr. GREENHALGH exhibited several specimens of Medicated Cotton Wool which had been recently made at his suggestion by Messrs. Bell and Co., of Oxford Street. He used them chiefly for application to the neck of the uterus and vagina. Being prepared with glycerine, they could be used much stronger and applied for a longer period, and are much cleaner than the greasy pessaries and suppositories in ordinary use. The specimens exhibited consisted of—

Cotton wool with iodine and iodide of potass.
" " atropine.
" " morphia.
" " iron and morphia.
" " tannin.
" " matico.

He had pursued the following mode of application:—A portion, about the size of a half-crown piece, secured by a piece of thread, is applied through the speculum to the affected part, over which a larger piece of cotton wool, similarly secured and freely saturated in glycerine, is to be placed, and retained *in situ* from twelve to twenty-four hours, when it can be withdrawn by the threads either by the patient or practitioner.

Dr. Aveling exhibited a spring intra-uterine stem, which was originally invented by Dr. Graham Weir.

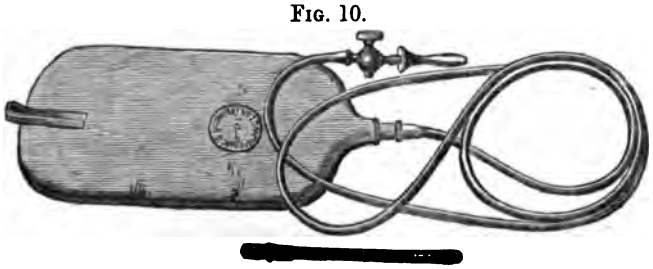
Dr. Wynn Williams exhibited a specimen of a large abdominal cyst which he had removed from a patient aged forty-six, unmarried, who had suffered more or less for twenty years. The patient was handed over to him by one of his colleagues at the Western General Dispensary, under the supposition that she had an ovarian cyst. Dr. Williams arrived at the same conclusion, as did also his friend Dr. Routh. As she was in imminent danger of dying from suffocation, she was tapped immediately, May the 5th, and seventeen quarts of fluid removed, having the appearance of that frequently removed from ovarian cysts. The fluid rapidly began to accumulate, when it was determined to give her a chance for her life by attempting the removal of the cyst. She herself being most urgent, dreading the distension she had previously suffered from, the slight probability of her recovery having been fully explained to her, Dr. Williams proceeded to operate on the 4th of June, assisted by Dr. Routh and others. The adhesions were found to be most extensive over every part of the tumour with the exception of the lower part. These were, however, broken down until he came to the upper and under portion, when the adhesion was found to

be so strong and extensive as to oblige him to remove only a portion of the cyst, leaving probably about a fifth. As the tumour had no connection with the uterus or its appendages, it was surmised by one that it might have its origin in the liver, by another in the kidney. The patient having unfortunately died on the following day, opportunity was afforded of demonstrating the fact that the tumour had really no pedicle, and although firmly adherent to the diaphragm, duodenum, and the parts in the neighbourhood of the right kidney, it could not be said to have its origin from any of them; the only solution being, as suggested by Dr. Routh, that it was one of those cases where a Graafian vesicle had escaped into the cavity of the abdomen, and become adherent to the tissues in the neighbourhood. Whether it might at one time have had connection with the uterine organs it was impossible to decide; it had none at the time of the operation. The cyst contained cholesterine and granular matter.

Dr. SANSOM exhibited a uterine and vaginal douche made at his request by Messrs. Francis, of Islington. It consists of an india-rubber bag capable of holding three pints of water. This bag being suspended at a height, the stream, regulated by a stop-cock, is directed and controlled by the patient herself. The bag is self-filling; the extremity of the tube being immersed in a vessel of fluid, the bag rolled up, and then placed on a lower level such as the floor, the fluid from the vessel gradually fills the bag to complete distension. Thus all leakage and spilling of the fluid are avoided.

The instrument is represented in this sketch, Fig. 10.

FIG. 10.



UTERUS DURING MENSTRUATION.

Dr. Graily Hewitt exhibited the uterus and ovaries of a young woman, aged fifteen, who had died of the effects of a severe fever in University College Hospital; also a coloured drawing taken while the specimen was still fresh. The specimen exhibited in a very perfect manner the changes in the lining membrane due to menstruation. The mucous membrane of the body of the uterus was in places as much as a third of an inch thick. It was very soft and velvety to the touch, attached firmly to the uterus everywhere but at the internal os, where it was very slightly separated from the uterine wall. The free surface of the mucous membrane was quite perfect, the orifices of the uterine glands were distinctly seen. The mucous membrane was intensely injected with blood at its deeper layers, and a bloody fluid exuded from the uterine glandular orifices on slight pressure. One of the ovaries contained a recently ruptured Graafian follicle, the opening through which the urine had escaped from it had apparently become closed, and the yellow ovisac presented, on section, the characteristic wavy outline. The Graafian follicle measured two thirds of an inch in diameter. The other ovary exhibited, on section, one or two old corpora lutea.

REMARKS ON THE USE OF FUSED ANHYDROUS SULPHATE OF ZINC TO THE CANAL OF THE CERVIX UTERI.

By J. Braxton Hicks, M.D., F.R.S.,

CO-LECTURER ON MIDWIFERY AND ASSISTANT PHYSICIAN-ACCOUCHEUR AT GUY'S HOSPITAL; EXAMINER IN MIDWIFERY AT THE UNIVERSITY OF LONDON, ETC.

I am anxious to call the Society's attention to the employment of anhydrous sulphate of zinc, cast into sticks of various sizes and lengths, for the treatment of those states of the canal of the cervix uteri which require styptics, such

as cervical leucorrhœa and turgid vascular conditions of the mucous membrane, frequently giving rise to menorrhagia.

The application of solid agents to the canal is a much more satisfactory proceeding than the use of fluid preparations injected within it, because these from their fluidity too readily flow away, and cannot overcome the resistance of the thick mucous secretion which lines the mucous membrane.

I have for some years employed tannic acid bougies and tannic acid pessaries, and also nitrate of silver in small sticks, but I have not found them so efficacious as the sulphate of zinc, which indeed has been of very marked service in these cases, acknowledged to give much trouble by ordinary measures.

These sticks of fused sulphate of zinc can be used either by passing a full-length stick to the inner os, allowing it to remain for a time; or a portion can be passed up to the upper part, and permitted to remain there altogether till dissolved by the secretions. I myself prefer the latter plan, as its effects are more durable. It gives no pain worth consideration, and remains within firmly by the constriction it produces on the membrane. It may be employed twice a week.

I have also tried the sticks known as lapis divinus, composed of sulphate of alum and sulphate of copper; but the pain it produced was frequently severe.

The specimens I exhibit have been made for me by Messrs. Johnson and Sons, assayers, 11A, Basinghall Street, who, after some experiments, have overcome the difficulty which presented itself at first of giving sufficient toughness to sticks of such small diameter.

ON MENSTRUATION DURING PREGNANCY.

By Graily Hewitt, M.D., F.R.C.P.,

PROFESSOR OF MIDWIFERY AND DISEASES OF WOMEN, UNIVERSITY COLLEGE, ETC.

It is well known that in a certain number of cases menstruation, or a discharge at all events resembling it, is

observed in the course of pregnancy, and, in a few rare instances, with perfect regularity. The occurrence of discharges of this kind is frequently a source of embarrassment in reference to the diagnosis of pregnancy, and it can only be by the accumulation of well-observed facts illustrative of the phenomena in question that we can expect to arrive at its true explanation.

As a contribution to the knowledge of the subject, I take leave to relate the particulars of the following case:—

Mrs. R—, æt. 36, of delicate constitution, was delivered of her sixth child on June 23rd, 1865. She suckled it for three weeks, at the end of which time the child was weaned. The catamenial discharge occurred for the first time after the labour, on September 15th, and lasted ten days. There was no discharge observed during the following month—October; but on November 7th it again appeared, and lasted seven days. During this seven days the discharge was alternately of a bloody and watery nature. On December 7th she was "poorly" again, and continued to be so for six days. On January 8th, 1860, she became conscious of movements in the abdomen, like those of a child; but could not believe that she was pregnant. The movements, however, continued, and on January 24th she consulted me on the subject. There was plainly to be felt an abdominal tumour, the size of the uterus at four or five months of gestation, and the os uteri was very soft to the feel. On March 1st I saw her again, and obtained positive evidence of the existence of pregnancy, viz., the presence of ballottement. It was calculated that pregnancy should end about July 1st.

On May 17th, 1866, she was delivered of a female child, measuring eighteen inches in length. The nails had not reached the tips of the fingers, and I believe it was eight and a half months old, about a fortnight short of the proper time.

It appears, then, that the pregnancy must have begun early in the month of September, 1865, about September 1st or 3rd, and it follows, therefore, that a discharge like that of menstruation appeared three times afterwards.

Thus—Conception on or about September 1st or 3rd, 1865.
Menstruation September 15th to 25th.
" October, no discharge.
" November 7th to 14th.
" December 7th to 13th, for the last time.
Delivery, May 17th, 1866, of an 8½ months' child.

I am disposed to give the following explanation of the occurrence of menstruation in this instance.

I think it likely that there was a twin conception in the lady the subject of this case, and that one of the embryos perished about two months, or a little less, afterwards; the discharge of bloody, alternately with watery fluid, observed from November 7th to 14th, being possibly produced by the escape of the amnionic fluid belonging to that fœtus, and the blood by the separation of its membranes from the uterus. The subsequent occurrence of menstruation in December, a month later, resulted from the escape of blood from the decidua, as yet uncovered by the growth of the membranes of the healthy fœtus. The loss of blood which occurred at the time of the suspected abortion was considerable, the blood coming away in gushes such as are noticed in cases of abortion.

I think it likely that an explanation similar to that above given would apply to some few of the cases ordinarily spoken of as instances of menstruation during pregnancy; but it is reasonable to suppose that in the majority of cases of menstruation in pregnancy the source of the blood is the same as in ordinary menstruation, viz., the surface of the decidua. During the early months of pregnancy, and prior to the time at which the decidual chamber is abolished by the adhesion, or rather apposition, of the decidua reflexa to the decidua vera, there is nothing to interfere either with the exudation of blood from the surface in question, or with its escape through the os uteri. These cases of menstruation in pregnancy must then be looked on as cases in which adhesion of the two deciduæ together does not occur, and in which further there is an unusual tendency to exudation of blood

from the surface of the decidua vera. We occasionally hear of instances in which menstruation is observed during the whole period of pregnancy. There would seem to be no impossibility in this, nor is it necessary to have recourse for the explanation of such cases to any other theory than that just given.

It must be borne in mind, lastly, that slight or considerable losses of blood may occur during pregnancy from the presence of disease, or from accidental and partial separation of the ovum from the walls of the uterus. In such cases the discharge observed occurs irregularly. The above remarks apply solely to cases in which the hæmorrhagic discharge occurs with a periodicity like that which takes place in ordinary menstruation.

ANÆSTHESIA BY MIXED VAPOURS.

By Robert Ellis,

OBSTETRIC SURGEON TO THE CHELSEA, BROMPTON, AND BELGRAVE DISPENSARY.

The object of the present paper is to discuss the theory and practice of inducing anæsthesia by a mixture of agents. The superior safety of this practice, as established by experiment and supported by a very general feeling among the members of our profession, will be taken for granted. I shall not, therefore, do more than simply state a few general principles which serve to give anæsthesia by mixed vapours a basis of support. But I shall occupy the attention of this Society chiefly by investigating the theoretical principles of certain methods of inducing insensibility, heretofore proposed and partially put in practice; and I shall propound a new method, which appears to promise an economy, a certainty and rapidity of action, and a freedom from evil, greater than any which have preceded it.

The elaborate report of the committee appointed by the Medico-Chirurgical Society to investigate this matter supplies a series of facts, deduced from careful experimental inquiry, illustrative of the dangers incident to the anæsthetic process, whether by chloroform or by ether. From these we may learn the following important principles:

First. That the special action of chloroform is to depress the heart's power after a transient period of stimulation, and ultimately, in long-continued inhalation, to extinguish life chiefly through this influence.

Second. That when chloroform is given in its strongest doses it is quickly fatal to life by its action on both respiration and the force of the heart, the pulse and breathing being almost simultaneously extinguished.

Third. That the action of ether, when pushed to a fatal issue, is to destroy life chiefly by arresting the movements of respiration, and, in a minor and secondary degree, by enfeebling the action of the heart.

Fourth. That a mixture of chloroform and ether appears to obviate the dangers inseparable from the use of pure chloroform.

Fifth. That the addition to this mixture of a certain proportion of alcohol is valuable in the support which it seemed to give to the force of the heart, and in the equalisation of the vaporous escape of the different ingredients of the anæsthetic mixture.

Based upon this statement, various anæsthetic fluid mixtures are suggested by this committee, and have been put into practical use to a greater or less extent. It is to the constitution of these anæsthetic mixtures that I am about to draw attention in this paper; for, as already said, it is my purpose to take for granted the practical value of the suggestion of a mixture of vapours for the induction of anæsthesia; and I may be allowed to express my own most full concurrence in the principles here laid down, and my earnest conviction that they embody a true notion of the requirements of our art in the abolition of pain.

But the suggestion of the mixture of these agents in a

fluid form appears to have been accepted with little challenge up to the present time, unless, indeed, the very limited degree to which such mixtures have been applied for our use, either in hospital or private practice, is to be understood as a tacit condemnation of such a formula. Of late, however, there has been shown a greater inclination to make use of this suggestion, to which the ominous occurrence, from time to time, of a fresh chloroform accident has given a strong impulse.

The physiological action of the mixed vapour obtained from these fluids, in the limited number of experiments performed by the Chloroform Committee, appears to have occupied more of their attention than the consideration of the due order and rate at which their respective constituents evaporate; and for a single experiment, or for a few, it possibly did not much interfere with the result obtained that, as I shall show presently, at no time of its performance was the animal really inhaling the formula represented by the anæsthetic mixture in the fluid state. Thus, if that were mixture A, containing alcohol, ether, and chloroform, it would be breathing the vapour of ether in far greater proportion than that found in the fluid, because of the greater volatility of this ingredient.

In addition, it does not appear that any very special care was taken to procure really good and reliable specimens of the anæsthetic fluids experimented upon.

In order to obtain certain standard specimens of ether and alcohol, the constitution of which might serve for comparison in future experiments, I took considerable pains to procure pure samples of each. The *ether* I carefully washed and redistilled twice, so as to obtain it of a specific gravity of about 720; and the *alcohol* was also carefully rectified and finally distilled from fused chloride of calcium, so that it had a specific gravity of as nearly as possible 800, containing only two per cent. of water. With these samples of the anæsthetic liquids I then performed a very large series of experiments, in order to determine their behaviour toward each other in mixture, and their respective order of

evaporation. These were so conducted as to obtain accurate gross results, and to justify certain general conclusions, which might be safely acted upon in practice. The facts thus brought out may be summarised in the following manner:

First. That the ingredients of the anæsthetic mixtures evaporate, in a great degree, independently of each other, and in extremely differing quantities.

Second. That though alcohol exerts, in vacuo, a powerful influence in restraining and equalising their vaporization, this influence is in a great measure annulled in evaporation into free air, as in an inhaler.

Third. That the only method of obtaining an anæsthetic mixture is by consideration of the respective volatility of its ingredients, and so adjusting their proportions as to provide that all should evaporate simultaneously.

Fourth. But as this can only be done by a very great reduction of the quantities employed, both of alcohol and chloroform, then the object of the mixture is entirely frustrated, and it is reduced in its properties to one similar to ether only—the most volatile of the ingredients always taking precedence of the rest.

Fifth. That if impure alcohol and ether are used, these defects of unequal volatilization become still more exaggerated, and the result vitiated by the water left behind after evaporation.

It appears thus actually demonstrated that anæsthetic fluids should not be used in a combined, but in a separate, condition, and this constitutes the basis of the new system which I have introduced under the title of "Anæsthesia by Mixed Vapours," and have more fully described in my work on the 'Safe Abolition of Pain.'

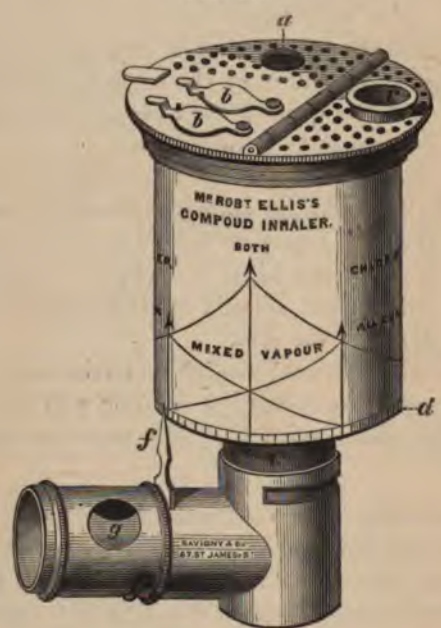
Premising only that care be taken to obtain alcohol of a specific gravity not greater than 800, and ether of a specific gravity of 720—which can readily be procured by special order of any operative chemist—I shall proceed to state the general principles upon which I have constructed my new anæsthetic process.

The objects which, in the introduction of this method, I have endeavoured to keep steadily in view are—

First. Entire security against the excessive action of either of the anæsthetics.

Second. The production of a modified anæsthesia, varying, at the will of the operator, from a mere feeling of exhilaration to the deep unconsciousness requisite for abolishing acute pain.

Fig. 11.



Third. The power of maintaining this state of anæsthesia at the same degree for any requisite period, or of modifying it to arising exigencies.

Fourth. The reduction of the dose of chloroform to its lowest practicable point.

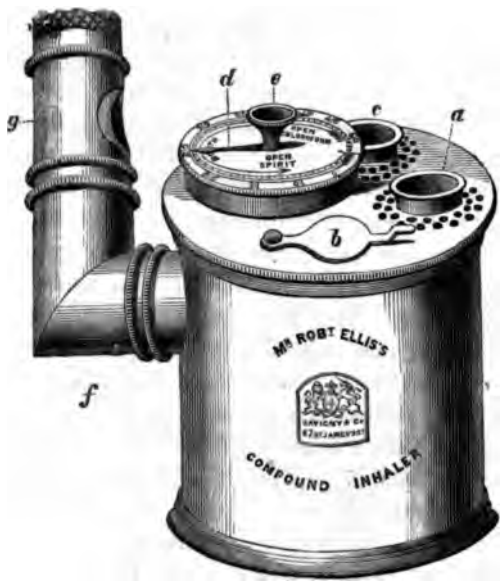
Fifth. The substitution for it of a vaporous basis of mixed alcohol and ether, whereby its properties are enhanced

and sustained, and its dose diminished without abatement of its value as an anæsthetic.

Sixth. The counteraction of the heart-depressing power of chloroform, by combining with it a heart-stimulant, thus obviating some of the most frequent causes of danger in chloroformization.

In the instruments now exhibited I have reason to believe that I have succeeded in accomplishing the objects thus

FIG. 12.



stated. They are of two descriptions—one specially designed for obstetric use, and the other for the operating room. The first is intended to rest upon the bed; the other is designed for holding in the hand, and to be immediately connected with an ordinary face-piece.

The general principle of both instruments is precisely similar, but the mechanical details are different. The instrument designed for surgical operations has a graduated

scale (*d*) engraved on the side of its cylindrical reservoir, and the reservoir itself rotates in a socket (*e*), and is thus presented before an index finger (*f*), which indicates the degrees of opening in the socket below. The letters *a*, *b*, and *c* indicate respectively the openings for pouring in alcohol, ether, and chloroform. The other is provided with a regulator valve (see *a* in fig. 13), which alternately opens, by turning a thumb-screw, the chamber containing chloroform or that containing alcohol and ether. This apparatus is shown in fig. 12. The thumb-screw (*e*) in this apparatus is attached to an index finger (*d*) which overlies a graduated scale accurately depicting the condition of the openings at each revolution of the screw. This apparatus is very convenient for use at the bedside, and rests securely on its basis. The details of construction will be better understood by examining the instruments than by any verbal description. The elbow and air-valve are shown at *f* and *g*, and *a*, *b*, and *c* show the openings for the anæsthetic fluids.

But I must now draw attention to a very peculiar feature in this apparatus, and one to which no small importance must be attached. It is the method by which the evaporation of the ether and chloroform are regulated. The alcohol representing chiefly the vehicle for the others, it appeared to me of the greatest consequence to contrive some simple plan by which only a certain portion of ether or chloroform could be liberated in a given time. In common inhalers a drachm of chloroform is poured in all at once, over a mass of lint or paper or cotton-wool, and the evaporation is left to its fate. The result is, that the air drawn through has at no time an exact or definite quantity of the vapour in union with it.

After making trial of numerous plans, it occurred to me to imitate the lubricating arrangements adopted in steam-engines and other machines, namely, to pour a definite quantity of the fluid into a little cup, and then to cause it to liberate itself by inserting in it a few strands of cotton wick. The capillary attraction instantly makes itself felt, and the fluid leaves the cup in a beautifully gradual

manner. If we take a small minim measure, and pour into it a drachm of ether, and then immerse in it six or eight strands of cotton wick, allowing them to hang a little over its sides, it will be seen that the ether leaves the measure with great regularity until it is entirely emptied. The experiment is so curious and interesting that it will repay the slight trouble of performing it. With chloroform the same happens, but more slowly. In proportion to the number of the strands of wick is the evaporation and the loss of fluid; and this can be so timed that a definite per-centage of either chloroform or ether is given off for every inspiration drawn through the apparatus. Thus, not to detail a number of minor experiments made to settle this point, it was found that, at a temperature of 65°, a test-tube holding one drachm of chloroform, and from which sixteen threads of cotton wick depended, and were made to rest on a few inches of cambric frilling, lost rather more than six minims per minute, in the open air. But this evaporation was nearly doubled in the draught of the inhaler.

Fig. 13.

Thus, an accurate measure was obtained, by which a most complete control could be effected over the escape of these two volatile liquids, and an additional security was afforded against an overdose of either. In fact, it has been the discovery of this simple arrangement which has enabled me to effect a remarkable economy in the use of the fluids used in the process. Fig. 13 represents a section made to illustrate this part of my apparatus.

Within the compartments for chloroform, and in that for ether, is fastened a little ring (*c* and *d*), and into this is dropped a test-tube having from six (for ether) to eight (for chloroform) strands of cotton wick, hanging down on opposite

sides, making twelve to sixteen strands for evaporation. The tube holds about sixty minims. At the bottom of the compartment is a little cambric frilling, placed so as to catch any drops which may fall from the wick. This is the whole arrangement. Immediately that the fluid is poured in, it begins to ascend the wick, becomes exposed to the inspiratory draught, evaporates, and is steadily replaced by fresh, until the whole is used up. The regularity with which this most simple contrivance does its duty is most satisfactory, and I commend it to any who, not caring to adopt the whole of my principles of anæsthesia, may be glad of an adjustment so perfect in action and so incapable of derangement.

The device by which I have effected the large evaporation of alcohol, according to my views, essential to the system of mixed vapours, is also peculiar, and is shown at *e*. With a few pieces of brass wire a little cage was made, in miniature representing the arrangement adopted in floor-cloth factories, but really designed from a consideration of the respiratory apparatus of the fish. After much trial, the very best material for evaporating the alcohol was found to be the beautiful cambric frilling made at Coventry, and perfectly free from all "dress." This fabric, an inch in width, was passed alternately over cross-wires at the top and bottom of this little frame, until fifty inches of it were contained in a space not more than three inches in depth by one inch and a half in diameter. Thus hanging in vertical folds, the air inhaled passes over it without impediment, and in its course robs it of the alcohol which is poured on from above. If it be desired, so powerful an impregnation of alcohol vapour can be thus got as to be almost too irritating for use.

The evaporating surfaces are here adjusted so as to afford, as nearly as may be, an equal amount of vapour from each of the three fluids. The amount of alcohol vapour given off by the above arrangement is, at ordinary temperatures, equivalent to an impregnation of the air passing over it to about two per cent. If stronger than

this, it produces irritation of the larynx and cough. The highest possible quantity which can be given off from the chloroform compartment does not exceed three per cent. with the number of strands of wick directed to be used; and the same is true with that of ether. More commonly, there is a very equal quantity of all really consumed. The fluids are supplied by a little minim measure to the different compartments, at intervals varying, of course, with the requirements of the patient. This especially is true in the obstetric use of the instrument. The mixed vapours are drawn by the patient in inspiration through the elbow-tube (*b*) by an ordinary face-piece intervening elastic tube.

The time occupied for inducing insensibility by this apparatus varies from eight to fifteen minutes, according as the patient breathes more or less of the chloroform vapour. It is perfectly possible and safe to obtain anæsthesia in even less than eight minutes, but this time, or even the longer period, is generally preferred by me, on account of the very gradual manner in which we are then able to bring on a condition of unconsciousness. With the supply of chloroform under his finger, it is, of course, always within the power of the medical man to reduce the period of preparation, to which I attach so much importance. Or, if he prefers it, he may commence at will with chloroform only, proceeding just as with an ordinary inhaler.

I trust it may be found, in the future adoption of the system here introduced, that *the* great problem of the safe abolition of pain has been solved—not, indeed, by the discovery of any new anæsthetic, but by a simple utilisation of those with which we are quite familiar, and in such a way as that the ill effects of the one are counteracted by the properties peculiar to the others.

The author, at the conclusion of his paper, then exhibited his apparatus. On the table were models of the first inhaler on this principle (shown in fig. 14), and of the most recent and perfect apparatus. The separate compartments for alcohol, ether, and chloroform, were exhibited, with their peculiar

adjustments for equalising and regulating the escape of the different volatile fluids. The action of the index regulator was also shown, and the extreme facility and accuracy with which the amount of the dose of the vapours could be arranged, modified, increased, or diminished. The author also stated that a degree of narcosis could be obtained and sustained by his apparatus short of actual insensibility, and yet with almost total abolition of pain, rendering it specially applicable to natural labour; also that, since the instrument could never give off a greater quantity of chloroform than three per cent., the most complete security was thus afforded by it.

Fig. 14.

He then exhibited an entirely new inhaler, the lower part of which was devoted to the alcohol and ether evaporation, while on the upper was placed his newly invented Safety Chloroform Dropper. This, consisting of a glass bottle with open ends, and fitted up in a peculiar manner, with an arrangement for capillary attraction of the liquid, was so adjusted that any quantity of chloroform, from half per cent. up to three per cent., could be given off by it in very exact quantities. The bottle was shown in action to the meeting, and performed its required office with great regularity.

Dr. Sansom said that Mr. Ellis's paper was extremely valuable, and with many of his observations he entirely agreed. The importance of a proper dilution of chloroform vapour was most certain, and he was glad the subject was brought forward, for a lax method of administering chloroform still existed. Practitioners were scarcely aware of the fact of which he himself, from experiment, was convinced, that frequently, at ordinary temperatures,

by the ordinary means, such as a napkin, &c., employed for administering chloroform, an atmosphere containing thirteen per cent. of chloroform vapour is inhaled. Yet all agree that such a per-centage is dangerous. To come to a right understanding of what is the best form of anæsthetic, it behoves us to consider what is the nature of narcotism. In 1865 he (Dr. Sansom) propounded a theory as to this matter which he was sorry had not been more freely criticised, but an opinion concerning which he was very pleased to have obtained from Professor Beale, than whom no one is more highly qualified to give one. Dr. Beale said he had no doubt that Dr. Sansom's view of narcotism was true. The first action of all narcotics is upon the sympathetic. The first sign is augmentation of the heart's action. But the same influence which enhances the contractile power of the heart causes the arteries to contract also. In the case of every anæsthetic Dr. Sansom has proved that the arteries contract. Thus, the channels being narrowed, there is a diminished supply of arterial blood to the various organs. *Pari passu*, the blood itself is impaired in its function of imbibing oxygen and excreting carbonic acid. The phenomena of anæsthesia (narcotism) are due to the imperfect supply to the body of a deficiently vital blood. Perfect narcotism can exist with an exaltation rather than a depression of the heart's power. This is constant in the case of ether. Not so in the case of chloroform. After the capillary arteries have remained for some time contracted, if chloroform be still administered, dilatation occurs. This dilatation coexists with failure of the heart's power and signs of danger. These considerations explain the mode of death in the cases of the different anæsthetics. In the case of ether, the arterial system remaining contracted, the bulk of blood is cast upon the venous system, and death occurs from the palsy of respiration caused by the accumulation of venous blood. After death the right cavities of the heart are found distended. In the case of death from chloroform there is sympathetic paralysis, the heart stops, and the signs after death depend upon the moment at which arrest take place. A typical anæsthesia will be one which will steer a middle course between these extremes—one that will not cause such persistent arterial contraction as to throw the bulk of the blood upon the venous system, and one that will not rapidly produce the other extreme, paralysis of the heart and arteries.

Dr. Sansom could not agree with Mr. Ellis in so far prolonging the period of stimulation, and though he admired the very ingenious instrument Mr. Ellis had exhibited, he doubted whether its advantages might not be obtained by other and more simple means. Various anæsthetic mixtures had been recommended by the Chloroform Committee of the Medico-Chirurgical Society. On such mixtures he had lately made many experiments. He could not agree with Mr. Ellis, who said that the evaporating rates of the ingredients of these mixtures varied so greatly that no reliance could be placed

upon them. As regards a mixture of equal parts of chloroform and ether, the latter having a boiling-point 44° Fahr. lower than the former, *à priori* consideration would lead one to suppose that nearly all the ether would evaporate first. This is not strictly true, but, practically, it is almost so; and we may be sure that the physiological effects of a mixture of equal parts of ether and chloroform are almost entirely those of ether alone. Moreover, from the disagreeableness of ether and its long "stimulant" action, it is not advisable to use it, or dilutions of it, in the production of anæsthesia. Its great value is to prolong anæsthesia after this has been once induced by chloroform.

In alcohol, however, we have a diluting body on whose performances we can rely. True, alcohol has a boiling-point 33° Fahr. below that of chloroform, so that one would think that in mixtures of them the chloroform would principally evaporate first. However, if you take a given quantity, say 10 cc. of chloroform and a similar bulk of a mixture of equal parts of chloroform and alcohol, and note the rate of volatility of each, you will find that, whereas, in 10 minutes 26 parts of chloroform disappear, only 18·5 parts are comprised of the mixture. Herein, therefore, is a circumstance favouring dilution—the alcohol restrains the volatility. And not only so, for alcohol may be immediately detected in the resulting vapour, the proportions being, when certain volumes of air in a given time are blown over the mixture, 5·5 alcohol to 13·0 chloroform. Dr. Sansom considered that in the case of a mixture of equal parts of chloroform and absolute alcohol half the per-centage of chloroform was given off of that in the case of chloroform *pur et simple*. This may be shown in a very simple way. If you take two fluid drachms of chloroform and expose them on a flat dish to a certain number of expirations of air, a certain quantity of chloroform disappears; from the data you can easily calculate the proportion of chloroform vapour in the resulting atmosphere. Repeat the experiment with a mixture of equal parts of chloroform and alcohol; after the exsufflations shake the resulting mixture with a little water. This separates the chloroform, the volume of which can easily be read off, and the result compared with the former. He thought that any one who pursued this process would be convinced that a mixture with the chloroform to be employed of an equal quantity of alcohol will serve the purpose of diluting the resultant chloroform vapour so as to be one half its strength. Thus, a ready means exists of administering the anæsthetic in any degree of dilution in the simplest possible manner, without any apparatus wherein the various vapour-producing media are separated one from the other—an apparatus which, in the hands of those unaccustomed to its use, must lead to some amount of complication.

Mr. Ellis, in reply, stated that he could not sufficiently dwell on the fact that the fluid anæsthetic mixtures gave

off uncertain and varying compositions of vapour — a fact clearly demonstrated by many of the experiments he had detailed, and that, therefore, they were not to be relied upon. In midwifery practice especially, this error, owing to the duration of inhalation, was most manifested. He could by no means agree in the remarks of Dr. Sansom as to administering so high a per-centage of chloroform as four per cent. He was, by his system, perfectly well able to obtain speedy, and to sustain prolonged, anæsthesia with an allowance of barely one per cent., the security and well-doing of the patient being, in his opinion, in exact proportion to the diminution of the dose of chloroform. The vapours of ether and alcohol mixed with it seemed in an extraordinary manner to enhance the activity of the chloroform, and safely to sustain its force.

A SHORT EXAMINATION OF CERTAIN UTERINE AFFECTIONS, ESPECIALLY THOSE ACCOMPANIED WITH LEUCORRHŒAL DISCHARGE, IN THEIR RELATION TO PHTHISIS PULMONALIS, WITH CASES.

By R. Fawcett Battye, M.R.C.P. Edin., &c. &c.

Dr. H. Bennett, in the 'Lancet' of May 27th, 1865, has given six interesting cases of the relation between uterine affections and phthisis pulmonalis; and as his cases agree in many respects with my own observations, which, in reference to this particular subject, have extended over the space of fourteen years, a few general remarks, with cases, may be interesting to the members of the Obstetrical Society.

Before proceeding to detail any particular cases, it will be better to make a few remarks upon the subject generally. My attention was first arrested by observing a number of cases suffering from desquamation of the cervix uteri, with pale, watery, and sometimes yellowish leucorrhœal discharge; but which, if long continued, were accompanied with tubular breathing of the upper part of both lungs of a slightly rough or grating character. The respiratory murmur was

somewhat subdued, and the moisture of the bronchi rather limited than in excess. Saving from slight cold, to which these cases were very susceptible, there was no cough or expectoration; and in the act of respiration the intercostal motion was somewhat limited, but equal and natural; occasionally, however, it was in excess.

The ordinary symptoms of these cases were, much pain in the sacro-lumbar region, tenderness upon pressure over the epigastric region, with a feeling of emptiness or sinking, temporarily relieved by food; the appetite itself capricious and usually defective, and in many cases with much dislike to animal food; also a pain in the left side in the great majority of cases, which, according to my own observations, was over the region of the spleen, and thence spreading upwards to the inferior border of the left mamma. Frontal headache was another frequent symptom; it mostly came on immediately after rising, got better during the day, and returned towards evening. The heart's action was normal as a rule, now and then irritable from debility, but more frequently irritable from the constraint of stays unduly pressing towards the apex of the heart; lastly, general wasting ensued, especially of the lower extremities, with much debility. It was then in such cases that phthisis frequently followed long-continued leucorrhœa.

In another order of so-called uterine affections tubercular deposit was occasionally observed, but this deposit was not the cause of declining health, the deposit happening chiefly from six weeks to three months before death, but the patient sank prior to any softening or the formation of vomicæ.

These cases, though accompanied with an irritable uterus, tender to the touch, and now and then slightly withered or atrophied, are not necessarily uterine; for though the patient may consider the uterine symptoms the all-important ailment, yet it is truly a constitutional affection, arising from the want of power to assimilate nutriment in all the tissues of the body, especially the muscular; and the wasting itself differs from phthisis in not disintegrating the

fat or adipose tissue in so rapid and special a manner; but the waste is more equal, and therefore less perceptible. The skin is of a *dirty dusky hue*, very similar to that found in the early and middle stages of continued fever.

In its origin it is probably connected with some shock to the constitution, affecting more especially the nervous system, and I am satisfied that occasionally it is connected with unchaste and unnatural habits in both sexes.

This gradual decay, in its course and end, much resembles the decline of old authors, which they describe as distinct from consumption.

There is a third class of cases, commonly called uterine, which is particularly important in the present inquiry. It is attended with leucorrhœal discharge of a somewhat tenacious character, and recurs at intervals from three days to a week or more; during the interval there may be watery discharge, but this is rare. The uterus itself in these cases is somewhat enlarged, but natural to the touch, with the os tincæ mostly open and very tender to the touch. The catamenia are regular as a rule, but accompanied or preceded with very much pain, the pain extending from the line of Poupart's ligament round to the sacro-lumbar region; not infrequently it is very severe, and of a neuralgic character, over the region of the pubes.

This affection is not strictly a uterine ailment, but ovarian; and when treatment is directed too much to the uterus, by way of topical applications, the ovaries become exquisitely tender, and I have seen peritonitis follow the too definite treatment of the local tenderness at the neck of the uterus. In such cases the chief seat of pain is over the right or left ovary, for it is rare to find both simultaneously affected in an equal degree.

It is difficult to determine, by the most careful examination, whether the ovaries are merely irritable and neuralgic, or inflamed. In some cases the enlargement of the ovary, with its tenderness upon pressure, leaves little doubt as to the presence of chronic inflammation, whilst in others, from the absence of these characters and the intenseness of the

pain, neuralgia of the ovary is nearly as certain, and in one instance of the latter kind, the patient having died suddenly from diseased heart, the affected ovary was bloodless, and smaller than the one on the opposite side, which latter was normal.

Taken as a whole, these cases are best viewed as cases of *irritable ovary* from exalted nervous sensibility, and, according to a variety of external or internal conditions, it either turns to chronic inflammation or neuralgia of the affected ovary.

Good looks, with feebleness and slowness of the pulse, constitute the two most apparent symptoms when first seen, the patient often remarking that "I have been told my heart is not diseased, but it is very weak;" or, "My pulse is very weak and slow; and though I look strong, I am just the reverse."

In many of these patients, towards evening, there is great proneness to suffer from excessive abdominal distension, which disappears by morning, without any apparent cause. Again, two remote parts are frequently unduly plump or fat, if the affection is of long duration, namely, the regions of the deltoids and the gastrocnemii respectively, the patient often speaking of the latter as feeling a pain and fulness behind the knee-joint, which occasionally is quite swollen, especially towards evening, the same side as that of the affected ovary being the extremity usually complained of.

Besides pain over the ovary, neuralgia in various parts of the body is very common; its chief seats are over the pubes, in the popliteal space, the left hypochondriac region, the face (especially if there is a decayed tooth), and the head. A burning heat or scalding pain on the top of the head is one of the most constant symptoms next to pain in the region of the ovary itself. It is accompanied with great depression of spirits, or a certain wildness and uncontrollableness of the emotions, which lead the sufferer to often think she will jump out of the window, or do something equally rash. These feelings are certainly hysterical in a great measure;

but the common demonstrative hysterical fit is not common in these cases. The fits are more silent or imitative in their character if present, as of dying, coughing like some friend they have seen, or else retching as from pregnancy, without an apparent cause. The urine is occasionally very abundant and pale, but mostly normal, and very rarely albuminous.

The object of so far describing the *irritable ovary* is to show that in these cases, which are very frequently accompanied with tenderness of the os tincæ, and now and then with desquamation of the cervix and os, with a watery discharge, there is a decided tendency in the system generally to assimilate and *fix carbon*, as a hydrocarbon, in the form of fat, but so deposited as to form a very equal layer of adipose tissue beneath the skin, the trunk being, perhaps, most favoured; and so a kind of natural blanket, or non-conducting agent, is placed between the skin and the parts it encloses. The irritable ovary becomes decidedly prophylactic against phthisis; and if a patient appears predisposed to phthisis, and this latter affection steps in, the chances are that, in the midst of much weakness and general debility, the patient altogether escapes the more formidable affection of phthisis. Such, at any rate, has been my own individual experience in several cases since my attention was first directed to it.

Having made so long a digression, it is now time to relate a few cases in detail bearing upon the subject of uterine leucorrhœa, in relation to phthisis pulmonalis.

Case 1.—Mrs. H—, in 1855 æt. 45. When I first saw her she was mother of twelve children, and had had three miscarriages. Since her last miscarriage she had suffered much from leucorrhœal discharge, which was frequently very yellow; the catamenia were variable in quantity, mostly deficient, but regular.

She informed me that after she had suffered in the above manner for about two years she had hæmorrhage to a considerable extent from the lungs, accompanied with a cough,

for which she had derived much relief as an out-patient at the Brompton Hospital; but the following year she had a relapse of the hæmorrhage in a more severe form, and again received great relief as an out-patient at the same institution.

I saw her first in 1858. Her state was as follows:—She was subject to frequent sickness, and occasionally to diarrhœa, arising from an enlarged liver with irregular activity. The epigastric region was tender, with a gnawing empty feel, relieved by food, but returning a short time after. The appetite was very fastidious and variable. Had frequent pain in both sides below the ribs. She also suffered much from headache.

The uterus was enlarged, slightly prolapsed; the surface round the cervix unequal and rather hard, with decided desquamation and free yellow leucorrhœal discharge, which was remarkably constant, when the catamenia were absent.

The state of the lungs was not so bad as might be expected from two attacks of hæmoptysis of a somewhat severe character. There was dulness over the whole of the right lung superiorly; the left lung had tubular breathing through the greater part of its extent, but not in an equal ratio, certain portions being much more marked than others; but on neither side was the costal motion free, the right being the less mobile of the two. The expectoration was very great, mostly yellow; and when not yellow it was white and frothy.

She suffered much from perspiration, especially on one side, and since her first attack of hæmoptysis she had wasted much; but she had no hectic fever, nor any evidence of the formation of a vomica. She had no heart disease, but frequent palpitation; and when the palpitation was absent, the usual range of the pulse was 75.

The plan of treatment consisted in sustaining the system by plain, wholesome diet; tonics to improve the appetite; sedatives to check the cough; local astringents to arrest the leucorrhœa. It was found that the leucorrhœa was the

most persistent evil; but after long-continued use of alum and opium injection, it at last subsided.

The patient, after the first year, so far improved that the two following years she became fat and strong, and doubted whether her lungs had been so bad as she had understood.

The fourth winter she got a sharp cold, and had a relapse of her leucorrhœa, but in a new form, less frequently, but, when present, very free and mucilaginous; with tenderness over both ovaries, especially the left, and much tenderness in the left popliteal space of the same side. With the cold she lost no flesh, and only felt weak.

The following year (1863) she had slight pleuro-pneumonia of the right lung, followed by asthma during convalescence.

In November, 1864, she had a precisely similar attack of inflammation, followed by the formation of a distinct cavity, of considerable extent posteriorly, between the fourth and sixth ribs, near to the dorsal vertebræ. In the midst of this winter till April, 1865, she had asthma, sometimes in a most distressing form, but mostly like to asthma of advancing years.

The uterus is now normal in size, not prolapsed, and without leucorrhœal discharge. The appetite is moderate. On fine days she can get out; and in the house she, with the assistance of her eldest daughter, attends to all her domestic affairs; and though much thinner than she was four years ago, she is by no means so thin and wasted, nor yet so helpless in her domestic matters, as when I first saw her: and I attribute the decided improvement and prolongation of life chiefly to the more healthy and improved condition of the uterus.

Case 2.—Miss I—, seen in 1855, then æt. 20. Her mother and brother died in consumption; her father, a sister, and brother are living. Has had much pain and feeling of sinking in the epigastric region; appetite moderate; frequent frontal headaches; much pain also in the sacro-

lumbar region; the catamenia regular, but scanty; and has had leucorrhœal discharge for sixteen months.

State of the lungs.—Bronchophony over both lungs; much puerile respiration over apex of right lung, and bronchial piping; is subject to a hoarse, frequent cough, nearly the whole year round. The expectoration is slight, rather tenacious, and dark.

This young person remained much in the same state of health for two years longer, saving she got very thin during part of the time. The treatment was chiefly for the cough, combined with mineral acids and iron; but, upon the slightest indication of improvement, it was abandoned, in the hope that, once a turn for the better, then all would be well; till, finding that she got worse rather than better, she determined to keep under treatment for a continuous length of time; which done, the leucorrhœa entirely ceased; her cough also ceased about the same time, and the lungs became natural in their functions and sounds; and when I last saw her, which was in October, 1865, she was in good health, and had so remained for eight years.

Here no permanent good to the respiratory functions was effected, so long as the leucorrhœal discharge remained, and, if unsubdued, would have probably ended in phthisis pulmonalis, like other members of her family.

Case 3.—Miss G—, æt. 41, 1856. I saw this lady in June, 1856. She complained of indigestion, much sinking feeling at the epigastrium, and great lassitude; her catamenia had been slowly diminishing for the last two years. Seven years previously she had slight hæmoptysis, at which time her left lung had been pronounced weak, but not diseased. She was under the treatment of a man of much experience for some time, and seemed restored to perfect health; but for two years previously to my seeing her, she had suffered very much, and almost continuously, from leucorrhœa, to which she ascribed her present great debility.

The respiration over the upper part of both lungs was very distinctly puerile, and on the left lung the bronchial breathing was feebler and more imperfect than on the right.

Tonics and country air much improved all her symptoms; but in the following June (1857) she could not be induced to take a trip to the seaside or country, though assured that a weakness in the respiratory functions of the left lung still continued, though improved.

In August, 1857, slight but distinct dulness in the left lung superiorly, of about two inches in diameter, made its appearance, shortly followed by a mouthful of pure blood; and in four months from the appearance of dulness, there was distinct cavernous breathing over the dull region, near the sternum, between the third and fourth ribs, and another cavity on the same side below the clavicle, near the axilla.

In 1858, in the spring, tubercle appeared in the right lung, with dulness, softening, and cavities, as in the left; at which time I met Dr. W—, and we both considered her case hopeless.

After this she wasted rapidly, and died in the autumn of 1859.

Case 4.—Miss C—, æt. 30 when first seen in 1853. She was then suffering much pain over the left ovary, with occasional abdominal distension, and symptoms associated with dyspepsia and hysteria. She complained much of frontal headache, but still more of scalding heat and pain on the crown of the head, accompanied with much depression of spirits, which latter was attributed to disappointment in a love affair.

At this time she had excessive leucorrhœa, sometimes yellowish and watery, at other times tenacious and like the albumen of an egg. These symptoms continued, so far as I could gather, much the same for about two years, during which time she saw me about twice each year. During this time the respiratory functions were feebly performed, but not otherwise deranged.

In the spring of 1855, the leucorrhœa was yellow and watery, but rarely albuminous; the frontal headaches more frequent, but less troubled at the crown of the head with

scalding pain, as she described it. The tenderness over the left ovary was now very slight.

From this time the chest symptoms began to take a more serious aspect, and the object of her visit was to consult me about a frequent cough, with much expectoration. The superior costal motion was much intensified, and with it puerile respiration over both lungs. Summer and treatment improved these symptoms; but pain and sinking at the epigastrium remained unchanged—a state which lasted up to dissolution.

In February, 1856, she called again, on account of slight hæmoptysis. Upon examination, I found dulness on the right lung, from the fifth rib and downwards, with suppressed respiration, perhaps a form of passive chronic congestion; whilst both lungs, towards their apices, had loud tubular breathing in different isolated patches.

Six weeks later, Miss C— had distinct gurgling below the right clavicle, and also opposite the sixth rib laterally on the same side, followed by three patches of solidified lung on the left side, over which cavernous breathing was soon heard between the second and fourth ribs. She died in September of the same year.

Case 5.—Miss W—, æt. 21, 1856; of a delicate and pale complexion; whom I first saw at her brother's house a few weeks before his death, which was from phthisis pulmonalis. Her father had died early from the same disease; and her second brother, a medical man, I had treated previously for a hyperæmic condition of the right lung, of a very chronic character, but who perfectly recovered, and has for long busily continued his professional duties.

Miss W—'s only ailment in 1856 was slight hypertrophy of the left ventricle of the heart, with slight hardness of the semi-lunar valves of the aorta, accompanied with much palpitation at times.

I saw her no more for two years, she being quite happy in being assured that she had no lung disease. In 1858, she complained of much leucorrhœa. It came on two or

three times a week for several hours consecutively, and left her very weak. The discharge was mostly watery; the catamenia were regular, but variable in amount, and rarely attended with pain. She was not subject to lumbar pain, but frequently had sharp pain over the region of the spleen. She suffered much from frequent frontal headaches; had a great distaste for animal food, accompanied with an empty, sinking feeling in the epigastric region. On the left lung, by the upper border of the sixth rib, and near the apex of the left ventricle, distinct cavernous breathing could be heard. Over the apices of both lungs, especially the left, there was exaggerated respiratory murmur, but not distinctly puerile, with roughened and unequal tubular breathing.

Six months later, she spat up a mouthful of blood, and once or twice phlegm streaked with blood. Not long after, cavernous breathing could be distinctly heard opposite the third rib, near the axilla. Notwithstanding these grave physical indications, and wasting with increasing debility, there was comparatively little cough and expectoration.

To cut the matter short, from 1859 to 1861 Miss W— remained in a very doubtful state of health, and became very much wasted, yet never entirely laid up. After this time the leucorrhœa, which had much abated, entirely ceased; and it was succeeded by a new symptom, namely, tenderness over the left ovary, heat and pain over the crown of the head, and occasional abdominal distension. The catamenia, which, though regular, were exceedingly scanty, now became somewhat freer; but the appetite remained much the same. This was her state in the spring of 1861; and in the autumn following, decided improvement manifested itself, and both cavities became less distinct, their area being decidedly more circumscribed.

In 1863 she was so far better that an entire *arrest* to all further evil had taken place; and during the season of tranquillity and improvement she settled an outstanding difficulty by changing her name, and as Mrs. —— she remains in excellent health, and is now a mother.

Case 6.—Mrs. L—, æt. 23, 1856. Concerning her family I never could obtain any satisfactory account as to phthisis, scrofula, or anything else. Her own previous history was, that two years earlier she suffered for many months from a thick mucous discharge from the vagina, which was very frequent, and from which she felt at times very weak, and was frequently accompanied with much swelling of the labiæ. It subsequently changed to a constant watery, thin discharge.

About five months before I first saw her, she spat blood; after this the catamenia appeared to almost cease, and the leucorrhœa entirely. The cause of this change was ascribed to consumption, for which she had been treated the few months previously to my seeing her.

When first seen by myself, she was much emaciated, unable to sit up; had well-marked hectic, purulent expectoration, and much coughing. Her mental state was peculiar for phthisis: she was neither irritable, nor calm and composed, the usual extremes belonging to phthisis; but she was dreadfully nervous, extremely timid, and semi-hysterical.

Physical signs.—Mucous râle was present in both lungs; superiorly, gurgling was detected in distinct parts in either lung; and also on the right side, laterally, below the sixth rib, well-marked gurgling existed. In addition to the chest symptoms, she had intense pain in the sacro-lumbar region, and also anteriorly over both ovaries; but it was greatest on the right side, along the course of the broad ligament and its contained ovary, with a feeling of fulness and throbbing. The labiæ were slightly swollen, but no discharge; and the catamenia had entirely ceased. She also complained much of pain in the temples and on the top of the head.

My notes of this case go on to say, that with careful treatment the ovarian tenderness was subdued; the cough improved; cod-liver oil could be tolerated; and she got so far well as to be able to have change of air and scene by the seaside, and returned much improved in health and flesh.

In November of the same year, and six months from the

time of my first seeing her, I was summoned to her late one evening, suffering from a severe attack of peritonitis, radiating from the left ovarian region, where, she said, it first appeared. The attack arose from a severe cold she had taken during the catamenial period, the catamenia having returned for three months. She recovered, got about again, and gained flesh upon fresh air, stout, and good living.

Five years after this attack, when I supposed she had long since finished her earthly career, Mrs. L— called to tell me that she had returned to my neighbourhood, and was in perfect health, and had never been ill once, or required medical aid, since I last saw her.

Mrs. L—'s case must be classed amongst the exceptional cases, especially in her recovering, and so rapidly, after entering into so advanced a stage of phthisis; but it is a mere waste of words to say that no case of genuine phthisis ever does recover, or become thoroughly arrested, which is all the patient wants; for observers of very high position in the profession have, from time to time, witnessed such cases of spontaneous cure: to wit, such men as Drs. Graves, Radcliff Hall, &c.

Case 7.—Miss S—, æt. 16; stout and healthy till the summer of 1857. At this time she began to waste, and suffered greatly for one year from leucorrhœa; the menses were also slightly irregular, and much reduced in quantity; the digestion was often painful, and attended with much acidity and a sinking feeling at the epigastrium; had puerile respiration over both lungs at their apices. The following year (1858) had, opposite the third rib, on the left lung, and about two and a half inches from the sternum, a distinct dulness upon percussion; also over this part the respiratory murmur was obliterated, but the tubular breathing was roughened and tumultuous. The following year Miss S— twice expectorated a good mouthful of blood, during the spring season. After this time the leucorrhœa gradually subsided, and the chest symptoms improved; the digestion became less painful, but the appetite was exceedingly

capricious. She took a tour on the Continent in the autumn, and returned much improved.

In 1862 she married; but neither before nor since has she ever made much flesh, or regained her appetite; and though she is now the mother of two children, she has scarcely varied a shade from 1859, saving the dull spot on the left lung, which has entirely disappeared. She is still thin and delicate-looking, but considers herself stronger and slightly stouter.

Case 8.—Miss H—, æt. 23, 1860. I will simply copy this case from my note-book, as I have there recorded it in a very brief form.

Miss H—, short, spare, and very small in the general frame. Saw her in the third stage of consumption. Besides hectic, cough with purulent expectoration, and great wasting, with cavities in both lungs, she had much pain in the epigastrium, frequent sickness, and had had for long an intolerable feeling of emptiness over the epigastrium shortly after food, and at other times. Never had catamenia; the pelvic region and the mammæ undeveloped; the figure and features of the countenance quite girlish. She had had severe leucorrhœa for nearly eight years; had been less severe latterly. Began to waste shortly after leucorrhœa first appeared. Died October, 1860, about six months after first seeing her.

Case 9.—E. B—, æt. 16, 1860; of dark complexion, spare habit, and middle size; the chest contracted, with a prominent sternum; or, in other words, is a well-marked case of what is called "pigeon-breasted." Both lungs are solidified in isolated parts, and especially the left, where there is unusual dulness from the fourth to the ninth ribs, with suppressed respiration over the dull part. Puerile respiration strongly marked in the apices of both lungs, and accompanied with strong, rough, and rasping bronchial breathing a little lower down, with slight râle.

In addition, she has been much troubled with frontal headaches, sinking sensation at the epigastrium, with frequent pain; also much pain over the region of the spleen. Has

twice menstruated more than a year ago; since then the menses have entirely ceased; but she has had very free leucorrhœa, and almost without interruption. For the last twelve months she has wasted much, and suffered from a cough with much expectoration. The appetite has been very capricious; the temper more so. She is of a decidedly malicious turn of mind.

When five and a half years of age, I saw the same girl. She was then fat, of tawny-coloured skin, and rather gloomy expression of countenance, and was suffering from enlarged liver; she also had fits, which were of a convulsive character.

I ordered her nothing else than two roasted apples every day for six months (which contain malate of potash), for enlarged and inactive liver. At the end of six months, the liver was normal in size, the skin was clear, the fits had ceased, and her manner was cheerful. But a totally new order of grievances succeeded. Her dull and gloomy looks had given way to cheerfulness and precocity; but, above all, there was a remarkable modesty towards adults of the opposite sex, and so far was it carried that she could not allow her mother to comb her hair or wash her neck before her father, who was a hard-working shoemaker. The mammæ, which at sixteen years of age were quite shrunken, were at this time (six years of age) developed equal to a healthy girl's of fourteen or fifteen years of age; and, what was still more singular, she had to wear a napkin, on account of a clear watery leucorrhœa, which, though not at all periodic, was much more at one time than another.

Accompanying this singular condition was congestion of the right lung, with increased respiratory activity in the left lung. The heart was healthy, but excitable; and the digestion was moderately good.

In the course of six months the dulness over the right lung had slowly passed away, and so had the leucorrhœa. After this the puerile respiration became very much exaggerated, the child wasted, and was treated expectantly for consumption for some length of time.

The parents left the neighbourhood, and I saw the girl

no more till nine years after, when I found her as before stated. But of the issue of this case I cannot speak, as the parents have again removed some distance off; but it shows a remarkable connection between certain conditions of the uterine system and the lungs.

The number of cases given are exceedingly small, but they are sufficiently varied to give an idea that in some way or other, between the uterus, or generative organs, and the lungs, there exists some mutual functional arrangement which, if disturbed, act and react upon each other for good or evil; and in studying the diseases of one class of organs, more remote organs must not be passed by as unimportant or unrelated to each other.

To give any statistical estimate of the per-centage of cases of consumption preceded with leucorrhœa, in the present state of our knowledge, is presumptuous; but, from past observation, those cases of phthisis preceded by continuous leucorrhœa for one or two years before tubercle actually presents itself as a morbid product in the lungs, is not probably under fifty per cent. in females from eighteen to forty years of age. Future experience can alone decide upon the importance to be attached to particular morbid conditions tending to retard or develope so formidable a disease as phthisis pulmonalis.

Treatment.—The remedies I have chiefly employed in the foregoing and like cases are cod-liver oil, iron in various forms, gentian, calumba, or vegetable bitters generally, and any suitable agent to improve the system in general with the digestive powers. I rarely, in these cases, use local applications to the uterus, but rather constitutional treatment, after the example of the late lamented Dr. Rigby; the first case here recorded being the only one in which I used local treatment to the uterus. In that case the patient used a tepid injection of alum, opium, and water daily for one year, and the greater part of that year nothing else.

From iron, in my own hands, I have found the most permanent benefit from its long-continued use. The

following are the chief forms in which I have used it:—For weakness of the lungs, with ægophony and much puerile respiration, accompanied with long-standing leucorrhœa of a watery character: Ferri Sulphas, three grains; nitric acid, three minims: rub them well together, and then add three minims of the Vinum Antim. Tart. (which checks the steel from affecting the head), and one ounce of infusion of calumba or quassia. Half this draught, taken twice a day for three or four weeks, or more, appears to very efficiently check leucorrhœa, improve the appetite, and strengthen the system generally. There are many forms for this state equally as good, but it is the one I have most commonly used.

When there has been leucorrhœa of long standing, and followed by hyperæmia, or chronic congestion of one lung or both, usually commencing from the lower margin of the fourth rib and downwards, with or without small solidified spots in the upper part of the lungs, I have used the Ferri Ammonio Citras of the London Pharmacopœia, with Potassæ Nitras, of each fifteen grains to the ounce of water, and a few drops of chloric ether, to be taken two or three times a day for two or three months. Of the combination of nitrate of potash with iron, in this or some other form, I know of nothing comparable to it for removing atonic hyperæmia of the lungs, a frequent precursor to tubercular deposit.

When there has been long-standing leucorrhœa, with its attendant symptoms of wasting and indigestion; or even plumpness, but much lassitude of the frame and proneness to neuralgia, and the lungs are marked by patches of solidified parts of a limited character, especially in the upper part of the lungs, and patients so affected have had spitting of bright, frothy blood; and in the centre, or thereabouts, of the solidified portion of lung there is only slight cavernous breathing, and the part is barely moist, with the entire absence of gurgling and hectic fever or colliquative diarrhœa —I give an extemporaneous iodide of iron, formed by double decomposition, namely, five or six minims of the Tinctura Ferri Sesquichloridi, with two or three grains of the Iodide

of Potassium, and about five minims of the Vinum Antim. Tart., to check headache, which is common if the antimony is omitted with this form of iron.

The compound is an iodide of iron, with iodide of potash in excess, and a little free iodine. It is very unpleasant to take, and often causes much burning in the throat, for which further dilution is necessary, and shielding it with syrup or chloric ether.

This form of iron appears to have a different action to any form with which I am acquainted, and in phthisis, in males or females, when long continued, has been followed in my own hands with more beneficial results than any remedy I have yet tried. I say, in the long run, its results appear to be more abiding than those of cod-liver oil.

Of the lardaceous or pancreatic emulsion of Dr. Dobell I have no practical knowledge, and therefore with it I can make no comparison; but in suitable cases I hope to carefully put it to the test, as its talented propounder has set it forth in a very fair and straightforward manner.

In all cases of phthisis, male or female, whatever other ailment of a non-acute character they may have, where there is distinct hectic fever, rapid wasting, or there are cavities with unequivocal gurgling, or colliquative diarrhœa, if the stomach will bear it, I invariably give cod-liver oil, and attempt no other leading therapeutic until the symptoms are distinctly arrested, and time is given (if that ever comes) to try more tardy remedies than even that is; for iron, to obtain its full effect, appears to act more slowly and requires a longer continuance than cod-liver oil before its beneficial, or sometimes its non-beneficial, effects are fully manifested, and well bears out that wise suggestion of Bacon's, which partakes more of the character of an apophthegm to guide medical men in their search after the legitimate action of remedies, than to reproach them for not having already attained to greater perfection in their use and application. He says, in his 'Advancement of Learning,' book iv, chap. ii,—

"To see the daily labours of physicians in their visits,

consultations, and prescriptions, one would think that they diligently pursued the cure, and went directly in a certain beaten track about it; but whoever looks attentively into their prescriptions and directions will find that most of what they do is full of uncertainty, wavering, and irresolution, without any certain view or foreknowledge of the course of cure. Whereas they should from the first, after having fully and perfectly discovered the disease, choose and resolve upon some regular process or series of cure, and not depart from it without sufficient reason. Thus physicians should know, for example, that perhaps three or four remedies rightly prescribed in an inveterate disease, and taken in due order, and at due distances of time, may perform a cure; and yet the same remedies, taken independently of each other, in an inverted order, or not at stated periods, might prove absolutely prejudicial."

Of local treatment let it be said that, as before stated of those cases recorded in this paper, only one had local treatment per vaginam; and in leucorrhœa generally, where there is chronic desquamation at that part of the cervix uteri proximal to the os tincæ, I have for long preferred the constitutional mode of treatment to the local; for, so far as my own individual knowledge is concerned, the local application of a weak solution of nitrate of silver to the affected part is by far the shortest method of cure; but it has not been so permanent as the constitutional method, saving when the desquamation is accompanied with narrow, deep fissures running for a short distance within the os tincæ; and in these cases the constitutional treatment has been in my own hands a mere waste of time, and the local treatment more effective and more abiding. But when the lungs are weak, or more or less affected, as a whole I greatly prefer persevering in constitutional treatment, whether agreeable or otherwise to the patient.

As for external treatment in phthisis, I mostly use a twenty- to thirty-grain solution of nitrate of silver to the ounce of water (or water and spirit), to be applied every night till the hue of the skin is changed, and to

be repeated in about three weeks later. The nitrate of silver, though viewed as a non-absorbent, has more effect than the iodine tincture in promoting absorption, as any one may assure himself of, if he will apply three successive times, at an interval of three weeks between each application, a solution of nitrate of silver to a common bursal swelling (twenty to thirty grains of the silver to the ounce of water), and compare the same with the compound tincture of iodine of the London Pharmacopœia, when used daily or on alternate days, as, for instance, to a case of housemaid's knee in an equally swollen state, and of like duration, for the space of eight or nine weeks.

JULY 4TH, 1866.

Dr. ROBERT BARNES, President, in the Chair.

Present—37 Fellows and 6 visitors.

BOOKS were presented by Professor Caval. Francesco Rizzoli, Dr. O. Spiegelberg, R. J. Cane, Esq., and Robert Ellis, Esq.

The following gentlemen, having forwarded the obligation paper duly signed, were declared admitted as Fellows by the President:—Allen G. Chattaway, Esq.; Albert L. Peacock, Esq.; Geo. Yeaman, M.D.; R. D. Tannahill, M.D.; and Alex. James Low, Esq.

The following gentlemen were elected Fellows:—James Coombs, M.D., Bedford; James K. Grosjean, Esq., Kensington; H. Mackintosh, M.D., Brompton Row; John Thompson, M.D., Bideford; and Disney Thorp, Esq., Birmingham.

Professor Cav. Francesco Rizzoli was proposed for election as a Foreign Honorary Fellow.

Dr. MEADOWS related a case of Hypertrophy of the Labium. The patient was twenty-seven years of age, married, and had had two children; had always enjoyed good health, except that she had been subject to psoriasis ever since the catamenia appeared, in her fourteenth year. About six weeks after her second child was born (three years ago) the labia suddenly became very painful, and much enlarged; cold lotions were applied, and she got some relief. In November, 1864, she was admitted into St. Bartholomew's Hospital, and some drainage-tubes were

passed through the mons veneris and left labium; but she left the hospital unrelieved—if anything, the parts had increased in size. When she came under Dr. Meadows' care the left labium was the size of the fist, and the whole mons was much thickened, indurated, and brawny-looking. The condition of the parts is very well seen in the subjoined sketch (fig. 15). On the 20th July, 1865, the entire labium

Fig. 15.

was removed, together with an elliptical portion of the mons. There was some smart bleeding for a time, and many vessels had to be secured; but she ultimately recovered, leaving the parts on that side of their normal size, but with some slight enlargement of the left labium.

Dr. Meadows also exhibited a good specimen of the so-called cauliflower excrescence, which he had removed, by means of the single wire écraseur, from the posterior lip of the uterus of a woman æt. 46, who had suffered more or less from uterine hæmorrhages for three years.

He also showed the écraseur with which he operated in the preceding case. It was made for him by Messrs.

Mayer and Meltzer. The principal feature in it is that a single steel wire, tempered in a peculiar way, is used instead of the ordinary wire-rope or chain. Dr. Meadows found by experiment that this wire is very much stronger than either of the others. It also occupies less room, and in his hands is much easier of application, while it does its work most effectually. He believes this will be found a great improvement upon the ordinary écraseur.

Dr. NEALE exhibited two specimens of singular Malformation, showing the influence of maternal impressions on the fœtus in utero in the lower animals—the cow and the mare.

THE STEEL FILLET OF E. R. SHERATON, L.R.C.P.E., M.R.C.S.

THIS instrument is intended to supersede the forceps, vectis, &c., in cases of difficult parturition, where the use of these instruments is indicated. It is constructed by combining a rotatory action with the fillet principle. It consists of two blades (*a*, figs. 16, 17, 18, 19) of highly tempered and flexible steel, curved in a somewhat sigmoid form, fitted and fixed into the rotatory bars (*b*, *b*) of the handle at one extremity, whilst at the other they are united by being riveted into a linked joint (*c*), which allows each blade to rotate in opposite directions to the extent of 90°. The rotatory bars are also formed and fitted with stops to limit their motion to 90°. The rotatory bars rotate upon the handle (*d*), to which they are fixed by nuts, being screwed upon their ends to retain them in their position. The handle (*d*) is flattened at the back part, to enable the operator to determine with accuracy its relative position to the fœtal head and maternal passages.

The rotatory action is obtained by pressing upon the transverse bars, or "lugs" (*e*), by which the blades are formed into a loop (fig. 17) of elliptical form, having a short

or transverse diameter of four and a quarter inches, and a long diameter of five and a half or six inches. Tractile power is obtained by placing the fingers across the transverse bars.

Fig. 16. Fig. 17. Fig. 18.

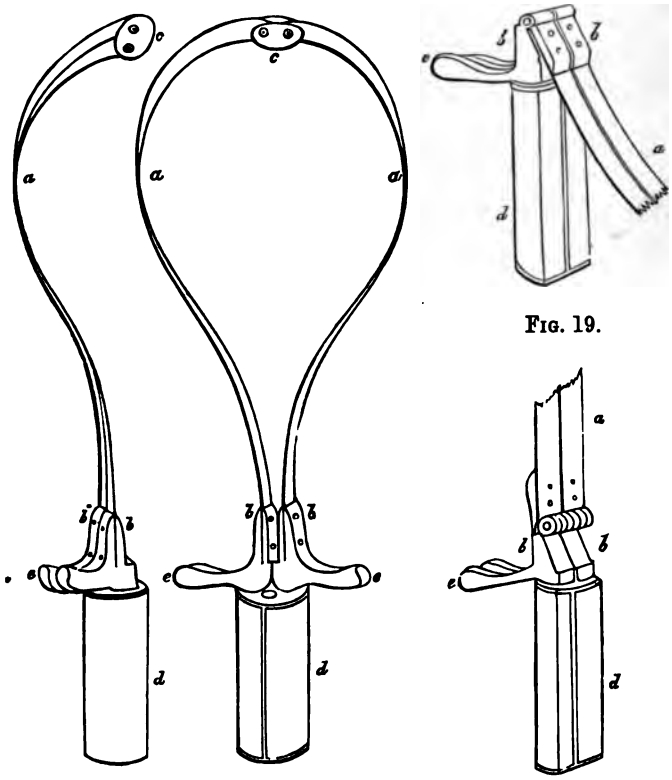


Fig. 19.

Figs. 16, 17, 18, 19.—*a*. The blades; *b*, the rotatory bar; *c*, the linked joint; *d*, the handle; *e*, the transverse bars or legs.

Fig. 16.—The blades parallel.

„ 17.—The loop formed by the semi-rotation of the blades.

„ 18, 19.—With folding joint, to render the instrument more portable.

Its application may be effected by the blades being parallel or a little apart, forming a sort of fenestrum; and it is to be introduced in the same manner as one blade of the forceps

or the vectis, using the same precautions and preliminary measures as with those instruments. It may be applied over the occiput or chin, as desired; the blades are then to be made to rotate by pressing upon the transverse bars, when it is converted into a loop embracing the head.

Its application is facilitated by the form of the linked joint, which renders the instrument, as it were, probe-pointed, whilst its being slightly moveable renders it less liable to catch folds of the maternal passages, &c. The flexibility of the blades allows it to adapt itself to the axis of the pelvis and to the form of the head. The thinness of the blades, from the small amount of space which they occupy, is also calculated to facilitate its application. The fingers are to be placed across the transverse bars, and tractile force applied in the direction of the axis of the pelvis. The amount of compression upon the head is always in proportion to the amount of force required in extraction, and, from the manner in which that compression is applied, it is not liable to cause injury to the child.

The chief advantages which this instrument seems to possess over the forceps are—

1. That its application is easier from—*a*, the narrowness of its blades; *b*, the thinness of its blades; *c*, its flexibility.
2. That one blade is of easier application than two.
3. It is less liable to injure the maternal passages or the fœtal head.
4. It occupies less space than the forceps.
5. It can be used without the knowledge of the mother.
6. From the facility with which it can be applied, the duration of the operation is shortened.

It may be made with folding-joint, to render the instrument more portable, as figs. 18 and 19.

Dr. Graily Hewitt thought the instrument highly ingenious, and likely to be serviceable in some cases, particularly when the head was quite low down; but he believed it could not take the place of the forceps in those cases where the forceps is so particularly valuable—viz., when the head is not so low down, and where there is some degree of impaction.

ON EXTREME SURGICAL TENDENCIES OF UTERINE PATHOLOGISTS; AND ON THE DIVISION OF THE CERVIX UTERI.

By E. J. Tilt, M.D., M.R.C.P.,
CONSULTING PHYSICIAN TO THE FARRINGDON GENERAL DISPENSARY, ETC. ETC.

Although I have always insisted on the paramount importance of constitutional remedies in the treatment of diseases of women, none of those who may have read my contributions to uterine pathology will accuse me of undervaluing the surgical modes of treating many of these complaints; and if I now presume to enter a protest against the too frequent use of the knife, it is because it seems to me that there is a growing tendency among uterine practitioners to disparage therapeutics and natural agencies in the treatment of diseases of women, to attach an undue importance to operations, and to multiply them unnecessarily. The evidence of the marked surgical tendency of the present epoch is to be found in the frequency with which operations on the female organs of generation have been discussed in this and other medical societies during the last ten years; the warmth with which the priority to slight improvements of instruments, or operations of limited applicability, are vindicated in the medical journals; and in the fact that this active surgical movement is now carried on by some of those, who, in 1851, objected strongly to precise physical examinations as useless to discover, and as unnecessary to treat, uterine diseases. Evidence of the same undue tendency will be found in two works recently published by distinguished Fellows of this Society. One, by Dr. Marion Sims, is undoubtedly a most valuable contribution to uterine operative surgery, but conveying the notion that medicines are of little or no avail in the treatment of most of the diseases of women, and that the knife is the omnipotent means of curing them. In the other work, Mr. I. B. Brown estimates still

higher the value of the knife, for he seeks to establish that the removal of the clitoris is often the best way of curing hysteria, epilepsy, and insanity.

While deprecating the too frequent use of the knife, I can easily understand the tendency as a natural consequence of the splendid surgical achievements of several Fellows of this Society, who have thereby helped to establish it on a firm basis, and have given it already a wide-world fame, and I trust they will take the following remarks as the friendly warning of one who greatly admires their talents, and is anxious that they should hand down to posterity reputations unsullied by the taint of eccentricity or exaggeration. It was, indeed, natural that the success of ovariotomy and of operations for the cure of vesico-vaginal fistula should have tempted surgeons to aim at curing other complaints by the knife, and to undervalue the slower processes of surgery and therapeutics. The slitting up the cervix is one of the operations which I believe to be too frequently performed. Since it was first devised by Sir J. Y. Simpson, this operation has greatly risen in the estimation of many eminent practitioners, so much so that several have modified the uterotome and devised special instruments for the operation; and instead of the simple division of the cervix recommended by Sir J. Y. Simpson, some find it necessary to make two deep incisions, while others cut through the entire vaginal portion of the cervix down to its attachments to the vagina. The division of the womb is now no longer recommended merely as a cure for dysmenorrhœa and sterility, but for uterine displacements and malformations and for the flooding of uterine polypi. The great value attributed to this operation is also shown by the space that it occupies, and by the frequency with which it is recommended by Dr. Marion Sims in his valuable work; but notwithstanding all this imposing testimony, I am convinced that this operation is greatly overrated.

With regard to the division of the cervix as a cure for dysmenorrhœa and for sterility, I am afraid that the operation is sometimes performed when there is really no stricture

of the cervical canal; at all events, it seems to me surprising that none of its advocates (at least, as far as my memory serves me) has distinctly pointed out what width of cervical canal is to be considered sufficient for the passing of the menstrual flow or for the ascent of the spermatozoa to the womb. Some criterion of this kind is absolutely necessary, for I have been repeatedly consulted by women who have been advised to have the womb divided for dysmenorrhœa or sterility, although I was able easily to introduce the uterine sound.

Practitioners seem to forget that it is a sign of the healthy condition of the unimpregnated womb that the uterine sound should encounter some difficulty in passing the sphincter that Dr. H. Bennet has called the os internum. This discovery of his has not been contested, and as it is generally admitted that the permanent relaxation of this passage is a sign of internal metritis or of uterine tumours, it would be unwarrantable practice to divide the womb in cases of dysmenorrhœa or of sterility merely because the sound encountered some little difficulty in passing the os internum. If I can easily pass a No. 4 bougie or the uterine sound, I do not consider it right to divide the womb, even if menstruation be inordinately painful and the discharge clotty.

I would not remind you that dysmenorrhœa may depend upon various pathological conditions if it had not lately been asserted that, when it was not to be accounted for by other diseases, it was caused by obstruction to the menstrual flow, and could always be cured by the division of the cervix. So far from this being true, I have occasionally met with patients who have suffered severely from the first to the last menstrual period without there being any uterine stricture or other discoverable source of uterine or ovarian disease. Such cases are rare, but have been met with by all pathologists, and must be taken as militating strongly against a too exclusive mechanical view of dysmenorrhœa and a too frequent use of the knife.

With regard to sterility, I am occasionally consulted by

women who are barren, and who have been advised to have the womb divided, although I was able to introduce with ease into the cervical canal a No. 4 wax bougie or the uterine sound. I should like to know who would venture to assert that this width of cervical canal is insufficient for microscopical animalculæ to pass through, and if it does not border on the absurd to seek to give a wider berth to spermatozoa by the knife or sponge tents, in the hope of curing sterility? The frequency of conception in young women, soon after marriage, is well known to obstetric practitioners; and I am convinced that it would have been found very difficult, in most of these women, to have introduced the uterine sound into the womb previous to conception. At all events, I have often found it difficult to introduce a No. 2 or 3 wax bougie into the virgin womb; nevertheless, pregnancy has subsequently taken place without the adoption of measures to widen the cervical canal.

The preceding considerations lead me to refuse my sanction to the division of the womb for sterility whenever the uterine sound can be introduced with little difficulty. I believe that surgeons unwillingly take an exaggerated estimate of what they can do by dividing the neck of the womb. Can they ensure pregnancy in the majority of cases? I do not believe it. The cases that are followed by conception soon after the operation are remembered and cited; the others fade from the memory of the operators, but occasionally come and tell their history to other consulting practitioners. Of such I have seen many during the last ten years. Can surgeons, at least, ensure the permanent widening of the cervical canal? No! Unless the knife be supplemented by the use of sponge tents, the divided surfaces generally unite, and six months after the operation the stricture is often found as bad as it was before. I do not blame surgeons for not being fully alive to this fact; for, if the hopes of pregnancy held out by them have not been realised, those who have paid a large fee will inevitably be disappointed, and will let things take their course or consult some one else. Thus it happens

that, while the operator dwells on the successful results of an operation, his unsuccessful cases teach his fellow-practitioners to take a much less favorable estimate of its value.

Although earnestly deprecating the too frequent division of the cervix, I do not wish to exclude the operation from obstetric practice. It should still be considered as one of the many benefits the obstetric art owes to the inventive genius of Sir J. Y. Simpson.

If it be very difficult to introduce a No. 1 or No. 2 bougie into the cervix, instead of pottering with sponge tents or any other tents, it is better to divide the stricture. If a No. 3 or No. 4 bougie be tightly grasped, and comes away bearing the impression of contracting rings, I consider the case is one for dilatation. This has been lately represented as attended by considerable danger; and no doubt it would be dangerous to dilate an inflamed womb, and still more so to dilate it so rapidly as to be able to introduce the forefinger through the cervical canal after the lapse of a few hours—a proceeding only required when it is absolutely necessary deeply to explore the uterine cavity. For dysmenorrhœa and sterility a more gradual process of dilatation is required, and I have never known it to be attended by serious results. A sensation of internal distension, back pain, a muco-sanguinolent discharge, a free flow of blood, excoriation, and inflammation of the os—these are the only untoward accidents to be expected when the womb and pelvic organs are free from inflammation, and these accidents speedily abate when the treatment is interrupted.

I will take this opportunity of remarking that, while I can understand the reasons that lead some surgeons to divide the cervix, and others forcibly to distend it, for several hours on alternate days, by gradually larger tents, I cannot understand the utility of dilating firm tissues half an inch thick, for a few minutes every second or third day, by means of the various uterine dilators that have been invented. In experienced hands these instruments may be inoffensive; but I think the passing of a wax bougie of

similar diameter would be just as useful, and safer for general use.

Dilatation of the cervical canal is often difficult, and it is best to begin by using wax bougies; and if one or two grains of acetate of atropia were incorporated in the wax bougie I feel convinced they would be more effectual. By using the sea-tangle tents or the sponge tents in the same way, at an interval of two or three days, for two or three months, it is generally possible to introduce easily into the previously contracted womb a No. 8 or a No. 9 laminaria tent. In some exceptional cases I have found the cervical canal become again strictured after six or eight months; then I divide the strictured parts, right and left, to the depth of about two lines, and follow this up by careful dilatation, without which the operation would be useless. I see no use in attempting to dilate tissues that have the consistency of gristle, and I prefer then dividing the cervix with the scissors. The loss of blood and the changes of nutrition that follow the operation will sometimes soften the tissues of the cervix, and give a fair chance of success to dilatation. Stricture is usually met with at the os internum, but I sometimes divide the os uteri when the extremity of the cervix has a conical shape, "en cul de poule," as the French say. When the cervix has this shape I find it is so easily irritated by tents that dilatation cannot be carried out. In such cases I make, with a pair of scissors, two deep notches about three quarters of an inch in length, one on each side of the cervix. If care be taken to prevent the union of the wounds by first intention, this alters the shape of the os uteri, facilitates the entrance of the seminal fluid, and enables dilatation to be proceeded with. With regard to the utility of dividing the cervix in cases of uterine malformation and displacement, I have no personal experience, but I have found it a useful mode of checking the flooding that accompanies large fibroids.

I have made the foregoing suggestions in order that we may come to a clear understanding with regard to the limitation of this operation to appropriate cases, and to prevent

its being considered as a panacea for intractable diseases of the womb. For instance, I think the division of the cervix useless, and therefore objectionable, in those exceptional cases of chronic uterine inflammation which are so liable to a relapse in women of singularly bad constitutions. Three years have elapsed since the operation in two cases of this description, and the liability to relapses of uterine inflammation has been as great after as before the operation. A third case is that of an old patient of mine, who was operated upon about a year ago by another practitioner, and I learn from Dr. H. Bennet, who is now attending her, that the result of the operation has been to exaggerate the uterine disease and to impair her health.

It is not my object to take up your time with an account of the various and the complicated instruments that have been constructed to divide the cervix. I feel convinced they are perfectly safe in the hands of their inventors. I shall merely say that the simplest instruments are the best —Simpson's uterotome in some cases, and the scissors and knife in others. Since the introduction of perchloride of iron, it is hardly possible that the division of the cervix can lead to uncontrollable loss of blood, but a case of death that recently occurred from peritonitis, on the ninth day after the operation, shows how necessary it is to watch the patient carefully for some weeks after the operation.

Dr. Greenhalgh deserves our thanks for giving us an account of this fatal issue. Dr. Rogers mentioned that he had lost a patient in a similar way; and if any such cases have occurred to other Fellows, it would be instructive to know under what circumstances, so that we may arrive at a correct estimate of the dangers of the operation. The fatal cases that are said to have occurred in Scotland from loss of blood happened, I suppose, before the introduction of perchloride of iron. Even when it is intended to supplement the division of the cervix by dilatation, and still more if it is only proposed to divide the cervix, it is obvious that the surgeon cannot and should not promise that pregnancy will be the certain result. The operation should only be spoken

of as rational, unattended by danger, and having been sometimes followed by children. I mention this because I have repeatedly astonished patients by considering as doubtful, what others were understood to represent as certain to occur. I should be very sorry to misinterpret so distinguished a surgeon and esteemed a friend as Dr. Marion Sims; but it seems to me that, in his work just published, he promises in this respect far too much to the profession, leading the inexperienced among our fellow-practitioners to conclude, from many parts of the work, that a free passage of the semen to the womb is inevitably followed by pregnancy, whereas it may be interfered with by many different pathological conditions of the ovaries and of the womb, or by the diseased state of the semen from syphilis or other causes, which are often overlooked when women are accused of sterility.

I apologise for reminding you of so simple a rule as that no operation should be performed without the previous consent of the patient or of some responsible relative. In three instances I have known the womb to have been divided without the patient's being made aware of it, and in two the loss of blood was so great that it saturated the mattresses and carpets, causing a useless addition to hotel bills, besides the unnecessary protraction of convalescence.

Dr. Henry Bennet thought that Dr. Tilt deserved the thanks of the Society and of the profession for the paper read that evening. Although for the last seven years ill health had kept him out of practice, he had continued to take the liveliest interest in uterine pathology, and had made himself acquainted with all that had been written and said on the subject. As a result, he was deeply impressed with the idea that the therapeutics of uterine disease had taken of late too surgical a direction, and he thought, like Dr. Tilt, that this tendency required restraining, limiting, directing. After a seven years' absence from the debates of the Society, he could not but feel that it was passing strange that he should have to rise as a conservative, and that in the very arena where he had many a time, in former days, defended progress, and where he had been opposed and stigmatised as a rash innovator. When he commenced practice in London, twenty-three years ago,

uterine therapeutics comprised little else but the treatment of cancer, tumours, prolapsus, and constitutional conditions. The most continued and irrational opposition met his efforts to establish more correct views—to demonstrate that physical means of investigation were as imperatively demanded in the study and treatment of diseases of the uterus as in those of diseases of the heart, lung, bladder, rectum, &c. By degrees, however, more reasonable ideas gained ground, and this senseless opposition to the progress of science was vanquished. Now it had entirely ceased, and had become a mere remembrance of the past. Indeed, as stated by Dr. Tilt, the danger rather appeared to be in going too far the other way, and interfering too much. This seemed probable when a recent surgical work on female diseases, written by a clever, experienced, laborious American surgeon, his friend Dr. Marion Sims, proposed division of the cervix uteri on both sides, down to its vaginal attachments, as a remedy for all kinds of morbid conditions, for various deviations, and for sterility. Indeed, the doctor, in one page, stated that he and his colleague in the Female Hospital at New York had performed this operation 500 times in two years! Again, many recent writers and operators seemed imbued with the idea that the passage through the cervical canal to the cavity of the uterus ought to be what might be termed metaphorically as open "as a carriage door," constantly finding stricture therein, for which they operate by ruthless divisions, if it is not so. He (Dr. Bennet) believed that this view was founded in error, and that the greater part of these cutting operations were not in any respect called for or necessary. He believed also that this error would not be so constantly made were his discovery of a sphincter at the os internum recollected or recognised. This sphincter was a vital contraction of the circular fibres of the cervix at the os internum, similar in function to the sphincters which closed other cavities—the stomach, rectum, bladder. When the cold uterine sound reached it it contracted, and impeded its entrance into the uterine cavity, and a stricture was declared to exist. A wax bougie, No. 4 or 5, on the contrary, its extremity warmed by the hand, and slightly curved to the shape he had described as that of the uterine passages, generally entered with ease. The patent condition of the cervical passages which these authors appeared to consider necessary for conception was not natural, and certainly not necessary for the entrance of microscopic spermatozoa. It must not be forgotten either, in treating of sterility, that in England one married woman in six is sterile; in America, according to Dr. Marion Sims, one in eight. The causes of sterility were very numerous, and were not to be removed merely by cutting a royal road for the spermatozoa. Moreover, these divisions of the cervix healed up, and in a few months the narrowed condition was as bad or worse than ever in most cases. Twenty years ago, at Sir James Simpson's instiga-

tion, he operated in many cases, and all but abandoned the operation on account of these relapses. Since then he had generally used very small sponges if he wished to dilate, and had never once had an accident. The attacks of inflammation that had occurred in the hands of others had, no doubt, been caused by the attempted dilatation of inflamed tissues. The cervical canal ought to be perfectly sound when it was interfered with. In conclusion, he repeated that he quite agreed with Dr. Tilt that the uterus is nowadays too frequently interfered with surgically, and that the indications for operations required better defining.

Mr. Baker Brown said he thought the paper was brought forward at a most appropriate time, for he perfectly agreed with the author and with the observations of Dr. Henry Bennet that operations upon the cervix uteri were performed too frequently, and without proper regard to preparatory and subsequent treatment. He was glad to have the opportunity of stating before the Society, in the strongest language, his reprehension of the rashness with which this operation was performed in both the out-patients' department of hospitals and the consulting rooms of the operator. He had always taught that the operation of dividing the os and cervix uteri was one of great danger; and although he had performed it a vast number of times, he had never done so without careful preparatory treatment, and the most absolute rest for two or three weeks after the operation. He thought the danger was also increased by the frequent division of the internal os. For his own part, in all cases of flexions, he simply divided the cervix up to, but not through, the internal os; but in all cases of uterine hæmorrhage or intra-uterine fibroid tumours he then carried his incision through the internal os. In all cases, immediately after the operation, he plugged with oiled lint, and took every precaution to prevent the admission of atmospheric air. He believed the neglect of these precautions would generally account for the untoward results which so frequently followed the operation. He could confirm all that Dr. Bennet had said as to the opposition and persecution he had met with in reference to his treatment of uterine diseases; and when he reflected how triumphantly Dr. Bennet had overcome all his opponents by the truth of his practice, he (Mr. Brown) felt consoled for the opposition he received for publishing the results of his experience on a subject of which he as yet confessed himself to be but a learner. But as he had always, through a long professional career, immediately published any innovation which he had believed to be practically useful, so he would continue unto the end, feeling sure that the majority of the profession would always honestly investigate anything which he might place before them.

Dr. Head was of opinion that the expression "stricture of the os uteri" demanded a clearer pathological definition. He never had had the opportunity of seeing after death a stricture of any

portion of the cervical canal, and thought the specimens must be extremely rare. He believed that cases of coarctation of the os uteri internum, not dependent upon organic disease or deviations of the uterus from its normal axis, may be attributable very frequently to spasm of the muscular wall of the uterus, especially at the orificial zone. Irritation acting upon the lining membrane of the uterus or cervix reflects itself to the muscular apparatus of the uterus much as occurs in cystitis. He concurred with Dr. Tilt in the belief that in numerous cases operative interference had been premature, and that we should hesitate before we appeal to the knife; indeed, that it should be the last resource, and only employed after all constitutional and local measures had been found utterly inefficacious. He (Dr. Head) had lately contrived an apparatus, by means of which the vapour of chloroform unmixed with air can be passed into the cervical and uterine cavities, and had found chloroform vapour thus injected a remedy which was likely to afford considerable relief in cases of neuralgic dysmenorrhœa.

Dr. Graily Hewitt believed with Dr. Tilt that the operation of incision of the cervix uteri was too frequently, and therefore unnecessarily, practised. He differed from Dr. Tilt as to the indications for the operation. The uterine sound could frequently be introduced with a little patience in cases where the cervix was for menstruation purposes virtually strictured. He alluded particularly to cases, such as were by no means infrequent, where the canal was distorted and sinuous—a condition arising from thickening of the tissues of the cervix. The mucous membrane might be thickened also; but the chief condition was the irregular hypertrophy of the cervix itself. Then, again, he thought Dr. Tilt attributed too little importance to the effect of the presence of small fibroid tumours in determining flexions and consequent virtual stricture of the cervical canal. He believed many cases of cervical distortion and narrowing could only be dealt with effectually by means of a cutting operation; but the indiscriminate application of the operation was to be strongly deprecated.

Dr. Routh said the discussion proved how little the profession was agreed as to either the anatomy or pathology of stricture of the uterine canal. Anatomically, Dr. Savage did not admit a special sphincter at the internal os. Besides, did not circular fibres abound everywhere in the cervix? Then, as to the seat of stricture, it was strange to find eminent men—accoucheurs—fixing stricture almost invariably at the external os; whilst others, quite as eminent, place it at the internal os. Then, again, was it to be said the uterine cervical cavity was never to be cut except in cases of stricture?—and could not the depth of the uterine incision be regulated according to the case? In chemosis of the eye, who would deny the advantage of relieving the congestion by incision? So, in uterine disease, a mucous lining might be so congested as

to require scarification. The hysterotome effected this most satisfactorily. In parenchymatous uterine congestion itself it also was most beneficial. In conclusion, he could not allow physician-accoucheurs to remain under the stigma put upon them. Obstetric medicine was essentially *surgical;* and an accoucheur only proved his skill in acting *surgically* when prompt relief would follow, instead of acting *medically*, when cure would be thereby made very tardy or not occur at all.

Dr. BARNES expressed his gratification at seeing again amongst them one who had rendered such eminent services to obstetric science as Dr. Bennet. Referring to his own memoir on dysmenorrhœa and allied affections depending upon a peculiar conoid form of the cervix uteri with minute os externum, the President stated that he had therein quoted and adopted Dr. Bennet's views as to the os uteri internum. He believed it was very rarely the seat of stricture or the source of difficulties requiring division. All his experiences still pointed to the opinion expressed in that memoir, that the os externum was the seat of trouble; and when the peculiar formation which he had described existed the consequences were very often severe, and even dangerous. He had seen retro-uterine hæmatocele caused by it, and had known examples of young girls dying in consequence. It was absurd to rely upon medicines, or, indeed, upon anything short of division of the os externum, in such cases. As performed by him, the operation had always been safe. Speedy relief followed, and that in many cases which had undergone every other kind of treatment for years before. These were cases for surgical treatment.

Dr. Tilt having replied, the meeting adjourned to the 3rd of October.

OCTOBER 3RD, 1866.

DR. BARNES, President, in the Chair.

Present—48 Fellows and 5 visitors.

Mr. JAMES KEITH GROSJEAN was Admitted a Fellow, and Professor Rizzoli, of Bologna, Elected an Honorary Fellow of the Society.

The following specimens, for the Pathological Museum, were contributed by E. Newton, F.R.C.S.:

1. Two Surinam Toads—male and female,—the female showing cellules on her back in which the young tadpoles have been changed into toads.

2. The Pelvis of the Fœtus at about the 7th month.

3. Preparation showing the condition of the uterus and its appendages a few days after delivery, at about the 7th month.

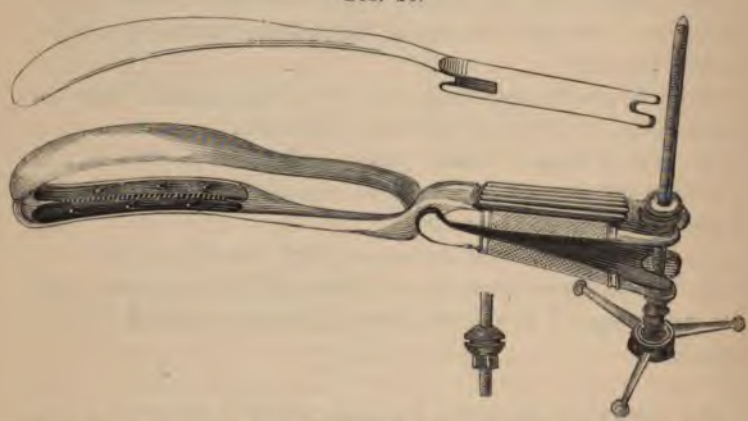
Dr. BRUNTON showed a Placenta which he had removed a few days before from a healthy primiparous young woman. It contained in its centre a round tumour about the size of a small egg. The specimen was referred to two Fellows for examination and report.

CEPHALOTRIBE.

DR. J. BRAXTON HICKS exhibited a modification of the Cephalotribe, which had been made to his directions by Mr. Griebel, of Walworth Road.

It was about the size of Prof. Sir James Simpson's, but with more parallel blades, altogether the length of the ordinary long forceps. The mode of employing the power to the ends of the handles was a new one. Dr. Hicks preferred the direct action to the indirect as being stronger and less liable to disarrangement. The best of those exhibited at the late soirée was that of Sir James Simpson; but as the female screw was made to traverse on the male by thumb-pieces, when the blades began to approximate, the end of the male screw pressed into the palm of the hand so much

Fig. 20.



that the screw had to be worked at the side, whereby much loss of power was sustained. In Dr. Hicks's instrument here represented (Fig. 20), the ends of the handle had a deep notch in each into which the male screw could be placed or removed at pleasure. The male screw was worked by a head with three arms, while the female screw, instead of being fixed to the handle, was really a spherical nut remaining on the male screw. This spherical nut fell into a hemispherical depression in the outside of the handles; so that when the male screw was dropped into the before-mentioned notches the nut fell also into the cup, whereby it was prevented slipping during use. There was also a spherical depression on the outside of the other handle, which corre-

sponded to a part of the screw at the handle-end, which also prevented any slipping while in use.

The length of the instrument is $13\frac{1}{4}$ inches; of blades, 8 inches; extreme width of blades when closed, $1\frac{1}{2}$ inch; length of screw, 6 inches. It had been employed with success in one case, as well as in numerous experiments on the stillborn fœtus.

The advantage of this arrangement being that the screw power could be detached from the instrument in an instant and reapplied as quickly, while the direct action was preserved, with a very convenient mode of employing the screw, and that it remained equally effective however divergent or closed the handles might be. The whole instrument had been made after many experiments on the dead fœtus, and he believed it would be found very usable. At the same time he confessed his indebtedness to Prof. Sir James Simpson, and to Professor Lazarewitch, of Charkoff, Russia, for their having shown that the larger instruments were not required, and for information they had kindly given him. It was clear that if their instruments were large enough, then the others were needlessly large. That they were large enough Dr. Hicks had also proved by experiments. That is to say, so long as perforation had preceded its employment. Without perforation it required very great force, but this was not of much practical importance, because if the case did not permit of perforation, then clearly it was not a case for the cephalotribe but for Cæsarian section. After perforation he had found the calvarium make little resistance; the base was the only real opponent.

Dr. Hicks was anxious to call attention to the cephalotribe as a substitute for the crotchet in many cases. He thought that the repugnance of the English practitioner was owing to the size and weight of the majority of the instruments hitherto made.

He had employed the cephalotribe now shown, in a case with complete success, where the crotchet had failed to deliver; and he had repeatedly tried it on the dead fœtus, with highly satisfactory results.

REPORT ON DR. WYNN WILLIAMS' CASE OF CYST REMOVED FROM THE ABDOMEN, AND EXHIBITED AT THE OBSTETRICAL SOCIETY'S MEETING, JUNE, 1866.

By Dr. Graily Hewitt and Dr. Wynn Williams.

The specimen consists of two parts, one of which was removed during life, the other after death. The two together constitute one large simple cyst. The part which was removed during life has now the shape and outline of a skull-cap, measuring in circumference 24 inches, and in height 7 inches. The diameter of the part removed after death, and which has an irregularly circular outline when laid out flat, is 8 inches.

The cyst-wall has a maximum thickness of $\frac{3}{16}$ of an inch. In parts it is rather thinner than this. External surface of cyst is smooth, covered in many places by a thin layer of fat and a smooth membrane, beneath which blood-vessels are seen. The cyst was firmly adherent to the diaphragm, a portion of which is still attached to the part removed after death. A piece of the intestine also adheres in an exceedingly intimate manner to the cyst-wall, two inches from the diaphragmatic adhesion. At these two points the wall of the intestine and the diaphragm respectively form the cyst-wall in part. Over the whole extent of the surface of that part of the cyst removed during life, no adhesion or sign of contiguity with other organs is visible.

The section of the cyst-wall shows a white, dense, homogeneous glistening fibrous tissue, evidently the true cyst-wall, with a thickness varying in different parts. Lining this, and readily separable from it, is a light-brown, dense layer, probably resulting from inflammatory action within the cyst. This layer is covered by a still more internal soft lining, presenting a mammillated appearance. On the part of the cyst removed during life this internal surface is

more firm than on the corresponding part removed after death.

The microscopic examination affords no information as to the origin of the cyst. The cyst-wall is composed of a very fine fibrillar tissue. No trace of connection of the cyst with the ovaries is visible. It is stated that at the post-mortem examination the uterus and ovaries were found entirely unconnected with the cyst.

In some respects the cyst resembles the cysts which have been found in the arachnoid, and described by Mr. Prescott Hewett and Dr. Ogle as originating in the presence of a clot of blood. Professor Wilson Fox, who has kindly looked at the specimen, states that he knows no other source for a cyst of this magnitude in the abdominal viscera than the broad ligament.

On the whole we consider that the cyst originated in the broad ligament, and consisted of an expansion and dilatation of one of the little pedunculated cysts there frequently found in a state of health. It is not necessary for the truth of this theory of its mode of origin that it should be found connected with the broad ligament after death. Evidence as to this point is not now forthcoming, but it is well known that fibrous growths attached by pedicles to the exterior of the uterus do occasionally become separated and transplanted on other adjacent organs. The clinical history of this case must be considered as supporting the view now maintained, for it appears that the growth was of twenty years' standing, and that when first perceived the enlargement was low down in the cavity of the abdomen.

CURIOUS CASE OF PROLAPSED PLACENTA.

By C. Smuts, M.D.

(Communicated by Dr. Priestley.)

On Wednesday, the 23rd December, 1863, Fielia, housemaid, then at about the term of her third pregnancy, was suddenly seized with pain in the uterine region, hæmorrhage, and a sensation of something protruding from the vulva. She walked home, a distance of about two hundred yards, where I saw her a couple of hours after, at six p.m. She told me that she had a fortnight ago suffered a similar sudden attack of flooding.

On examination I found the placenta, folded on its fœtal surface, protruding for at least three inches from between the labia. Introducing the finger of my left hand between the right labium and the placenta, and following the canal formed by the folded placenta and running towards the left of the pelvis, I could just reach the insertion of the funis after passing the ostium, which was dilated to more than the size of a five-shilling piece, flabby and dilatable. The head was presenting and resting towards the left on the placenta, rendering the introduction of the finger between it and the left labium rather difficult, so that I could not follow the placenta from this side beyond the ostium. The liquor amnii had escaped. Hæmorrhage there was none then, except a slight oozing from the exposed uterine surface of the placenta. Labour pains were very weak, and occurring at long intervals. The child living. The woman anxious, but not very weak.

Seeing that the ostium was sufficiently dilated to allow delivery by forceps or version if necessary, and thinking that the least traction would suffice to remove the placenta, I took hold of the protruding part and made such traction on it as I deemed sufficient to remove it, should it be wholly detached. Not succeeding, however, I desisted,

wrapped up the placenta in warm flannel, as the temperature of its exposed surface seemed to be lowering, and after the lapse of about half an hour, finding that the pains became still weaker and rarer, I administered to the woman three two-drachm doses of secale (in infusion powder and all) at intervals of twenty minutes, hoping thereby to excite the uterus to action, and thus to expedite delivery and as a preventive of post-partum hæmorrhage, which from the relaxed state of the ostium and the weak uterine action might be expected. The pains, however, went on diminishing, and had almost quite ceased by ten o'clock, when, as I lived close by, I left the woman in charge of a midwife, with orders from time to time to change the flannel, and to send for me as soon as the pains should become stronger. The next morning I learned that the woman had passed a good night, that the pains had ceased altogether, and that the placenta was in the same position still. Towards evening the midwife told me that the placenta was "going in." On Friday morning she told me that it had disappeared altogether. Of this I convinced myself, and on introducing my finger found that nothing could be felt of the placenta, although I passed it all round between the head and the ostium, which was as dilated and as relaxed as on Wednesday night.

The woman being in other respects quite well, I advised her to keep her bed, to have the midwife near, and to send for me on the first appearance of pain.

Visiting her again on Monday, I found that she had on Friday evening been delivered of a healthy child, the placenta being expelled immediately after the birth of the child.

To my regret I could not get the placenta, neither could I obtain any other information about it, except that the midwife had not remarked anything peculiar about it.

The fact of a great part of the placenta prolapsing, and after remaining exposed outside the vulva for more than forty-eight hours, being retracted within the uterus beyond the reach of the exploring finger, being unique in my

limited experience and resources of obstetrical literature, I think it deserving of being recorded, notwithstanding the incompleteness of the history of the case, for which I have no other excuse to offer than that I could not foresee the unusual turn which the case took. That the tumour was really part of the placenta is certain.

A CASE OF EARLY AND ENTIRELY DETACHED PLACENTA IN LABOUR PRODUCING INTERNAL AND CONCEALED HÆMORRHAGE, OF WHICH THE PATIENT DIED SOON AFTER DELIVERY.

By J. T. Mitchell, F.R.C.S. Eng.

Mrs. W—, æt. 40, the mother of eight children, and now advanced to about the ninth month of gestation with her ninth pregnancy, who had generally experienced natural labours, except on the last two or three occasions, when delivery had been followed with rather copious flooding, went to bed on the night of the 21st March, 1866, in her usual state of good health and strength. At five o'clock on the following morning, she was awoke by a most unusually violent and protracted spasm in the abdomen, so severe was it, that, although she had experienced many previous labours, she now became greatly alarmed, and therefore requested her husband (instead of fetching the medical man engaged to attend her in her confinement) to get the immediate attendance of the medical man residing nearest to the house, to be with her until her own medical attendant could be brought to her assistance. This severe pain was followed by that discharge of blood from the vagina, which, although not very great, continued more or less up to the time of the delivery of the child, which was a male, and stillborn. Her medical

attendant was with her about an hour and a half after she felt this severe agony, when he found her with very little pain, but excessively exhausted, and with slight discharge from the vagina. This being her condition, as the os uteri was but very little dilated, he, soon after his arrival, wisely ruptured the membranes, which induced expulsive action of the uterus: this brought down the head so as to press on the brim and os uteri, and almost completely stopped the external hæmorrhage. He now gave a full dose of ergot of rye, and labour pains followed regularly until the child was expelled with a vertical presentation in about half an hour; the placenta, which had been evidently long detached, immediately followed the birth of the child, and an immense gush of clots and fluid came after the placenta. At this time she became extremely faint and perfectly prostrate, with a rapid small pulse of 140 in the minute, cold, and in a state of great jactitation. Her medical attendant immediately put his hand on the abdomen, where he felt the uterus fully contracted; but this contraction soon went off. He then secured the abdomen most wisely by a compress and bandage firmly applied, and gave her continually brandy and ammonia freely. From this state she never rallied in the smallest degree, but went on sinking until the time when I saw her. She was then pulseless at the wrist and carotids, the action of the heart was scarcely discernible, she was blanched, cold, and in a state of extreme jactitation,—indeed, moribund; and she died within half an hour after I entered the house.

On my examination, I found a large clot of firmly coagulated blood, the size of a small child's head, in the bed, and the bed extensively sodden; but the uterus was perfectly relaxed and flaccid. After I arrived, not the very smallest quantity of blood passed the vagina, although I made the firmest pressure on the abdomen; indeed, by this time circulation had ceased, and blood could no longer flow.

This is the only case of immediate death after post-partum hæmorrhage that I ever witnessed in a practice of more than forty years' duration. It is one of those very rare cases where

the placenta was suddenly and, no doubt, entirely cast from the uterus by the violent spasm of the organ felt by the patient when first she awoke at five a.m. At this time the extensive internal hæmorrhage evidently commenced, but was not evident except by the very moderate discharge from the vagina, which was observable chiefly before the os uteri was dilated, and before the membranes were broken. By that act it was almost entirely stopped, although the internal bleeding was still going on up to the time when the fully developed child was born dead at nine a.m.; then the mischief was at once discovered by the instant discharge of the completely detached placenta, and the extensive flow of clots and serum. The mischief, evidently unpreventible, was done in this case long before the child was born; indeed within the four hours which intervened between the time when the spasm was felt at five a.m. and that when the delivery was accomplished, evidence of this bleeding existed, only slight, except the extreme faintness, exhaustion, and blanched state of the patient. The child, in every way fully developed, passed the canal of the pelvis by a regular expulsive labour of about half an hour's duration, and was born dead, evidently from the placenta having been so long separated from the side of the uterus, whereby the circulation between it and the fœtus had been suspended. The child also was in a perfectly blanched condition from loss of blood, through its connection with the exsanguined placenta.

A FATAL CASE OF CONCEALED ACCIDENTAL HÆMORRHAGE, OCCURRING AT THE EIGHTH MONTH OF PREGNANCY.

By Robert Dunn, F.R.C.S.

Dr. Hicks, in a valuable communication which was read before this Society in 1860, and is printed in the second volume of 'Transactions,' has collected together a series of highly interesting cases of *concealed accidental hæmorrhage occurring at the latter end of pregnancy and during labour*. The subject is deservedly one of deep interest to every obstetric practitioner, whether viewed, on the one hand, in reference to the rarity of the occurrence, or, on the other, on account of its formidable character and alarming import when it does occur. After an experience of more than forty years in active practice, and an attendance on between 6000 and 7000 cases of midwifery, the following brief but painful details of a case of concealed internal hæmorrhage which I lately met with, and which I have deemed worthy of record and of being brought under the notice of this Society, is the first and only instance of the kind that has come under my own personal observation.

On Sunday morning, February 11th of the present year, about seven o'clock, I was hastily called to Mrs. C—, living in my immediate neighbourhood, whom I had been engaged to attend in her accouchement. She was thirty-nine years of age, and was then eight months advanced in pregnancy with her eighth child. I had previously attended her on several occasions; and in every case she had a safe and easy labour, and always made a good and quick recovery. She was a fine woman, remarkably well-formed, and a most worthy and estimable character in all the relations of life.

In the beginning of the year she caught a severe cold, and, in consequence, became affected with a very troublesome and distressing cough, the paroxysms of which being frequent and severe, she greatly dreaded, as they shook her

whole frame so much. About three or four days before I was sent for, while in bed, in the course of the night, after a severe fit of coughing, she became quite faint, having, while coughing, felt some strange and unusual sensations in the womb, which led her to think that her labour was coming on. After a time the faintness passed off, and she rose in the morning as usual, and discharged her daily domestic duties.

About four o'clock on the Sunday morning that I was called to her, having passed a restless night, she became again so very faint after a severe attack of coughing, that she awoke her husband and asked him to go for the nurse, as she felt so ill, and thought, from her feelings, that her labour was coming on. The nurse, who was a sensible woman, took alarm at her state of prostration, and I was immediately summoned. I found her out of bed, wrapped up in a blanket on the carpet of the floor, cold, exhausted, and faint, with a weak and feeble pulse. After she had swallowed some hot brandy-and-water, we lost no time in getting her to bed, and in covering her warmly up. On making an examination after she had rallied a little, I found the os uteri quite closed. *There was no evidence that labour had begun.* When I told her this, and reminded her that she had only just completed her eighth month, she then said that her bowels had not been relieved for the last two days, and therefore she supposed that the state of her bowels must be the cause of the strange and peculiar sensations which she had experienced. I remained with her an hour, giving her from time to time brandy and ammonia; and as she had now rallied considerably, I left, and sent her a warm aperient draught, and promised to see her again in two or three hours.

I felt at a loss how to account for the strange and peculiar feelings of which she complained, and for such extreme exhaustion. About ten o'clock, just as I had finished my breakfast, a messenger came saying I was wanted immediately, for she was now in great pain and the water had broken. Such I found to be the case, and a large clot

of blood had also passed with the liquor amnii. She complained of great faintness and want of breath. The os uteri I found dilated to the size of half-a-crown, and the child's head pressing firmly upon it. From this time there was no external hæmorrhage, or at least only to a most trifling extent. From former experience I was hopeful myself, and I did all I could to rally and to cheer her up, giving her the assurance that the labour had now really begun, that the child's head was presenting for the world, and that all we wanted was strength, good spirits, and strong expulsory pains to complete the labour. She told me they had got some bottled stout in the house, and that she could relish a good draught of the stout if she might have it. She drank half a pint at once, and seemed greatly to enjoy it. After this, having rallied somewhat, I gave a dose of the ergot. The pains were weak and ineffective; but I found, when a pain was on, by pressing my finger against the head a slight gush of warm blood was expelled. I now no longer doubted that internal hæmorrhage was going on, and sent for my son and Dr. Robert Lee. Meanwhile I plied her with stimulants, brandy and eggs, ammonia, and beef-tea, incessantly; but, do what I would, I failed to rally her—the faintness and exhaustion increased. Dr. Lee found the os uteri no further dilated, confirmed my opinion as to the existence of internal hæmorrhage, referring me to his own work on Clinical Midwifery for illustrative cases in point. Our consultation as to whether anything could be done or ought to be attempted was cut short by our being again hurriedly called to her bedside, and then, after a very few minutes, to see her expire.

At the post-mortem inspection, a child of eight months was seen lying in the normal position in the womb, with its head pressing against the os uteri. After the funis was divided and the child removed, on taking hold of the cord with a view to raise up the placenta, this was found to be completely detached and quite loose, resting upon a large mass of coagulated blood, not less than a quart, in the fundus of the uterus.

Dr. GREENHALGH agreed with Messrs. Dunn and Mitchell, that fatal accidental hæmorrhage was of rare occurrence, having never met with a case until within the last few weeks, when he was applied to by a teacher of midwifery to see Mrs. ——, between thirty and forty years of age, mother of many children, who had reached the end of the eighth month of her present pregnancy. During the day of its occurrence she had undergone considerable exertion and excitement in moving into a new residence. In the evening she complained of some uneasiness about the left hypochondrium, which was followed by a slight discharge of blood from the vagina. Her husband at once apprised her medical attendant, who upon his arrival found her collapsed, although there was but little external loss of blood. He lost no time in administering brandy and ammonia freely, and putting a bandage tightly round the abdomen, and apprised her husband of the danger of the case, who sent off for my aid. I found her blanched, cold, and almost pulseless, without the slightest evidence of uterine action. In such a condition it was utterly impossible to attempt delivery; consequently brandy, egg, and essence of beef, were given by the mouth and rectum, and hot bottles were applied to the feet and legs. As she did not manifest any signs of rallying, but continued to get more and more feeble, eight ounces of blood from one of the servants was transfused, shortly after which she expired. Although no time was lost in performing the Cæsarean section, a dead child was extracted. On examining the interior of the uterus, the circumference of the placenta was adherent, except about two inches of its upper part, through which a portion of clot was protruding. Nearly the whole of the centre of the placenta was detached, between which and the uterus was a large coagulum, weighing from one and a half to two pounds. The uterus was remarkably blanched and flaccid.

Dr. BRUNTON said that shortly after he had commenced practice he had had such a case as that just mentioned by Dr. Greenhalgh, but in his (Dr. Brunton's) case he had the good fortune to save the mother's life. The case was that of a relative of his own, whose accouchement he was engaged to attend. A day or two before the expected time he was summoned early in the forenoon, and on arrival found the patient in bed, collapsed, nearly pulseless, cold, and in a state of intense suffering. There were no labour pains, but one continuous pain of an intense stretching character, which was partially relieved by lying on the right side. On examination, the abdomen was tense and hard, the os uteri dilated to the size of a florin, and the membranes tensely stretched as during a labour pain. There was no relaxation of them, as in the interval between true labour pains. He treated the patient with stimulants and beef tea, and waited, watching symptoms. There was no discharge of blood at all, until he ruptured the membranes (which he did some hours after), when an immense

gush of bloody fluid came away rapidly, followed by the head and body of the child; and then came three large clots of blood, each as large as a child's head. The placenta came away by pressure on the abdomen and uterus, and was found to have been apparently all detached, except a narrow rim about half-way round. The placenta was healthy, and somewhat cup-shaped on the uterine surface, caused, no doubt, by pressure of retained blood. The cause of the accidental separation of the placenta was probably due to the lady having missed a step on coming down stairs the night before. Dr. Brunton maintained that the chief diagnostic symptoms of accidental concealed hæmorrhage are—1st, the sudden collapse and fainting, with continuance of this state; 2nd, the intense continuous stretching pain, and the tense state of the membranes, also continuous.

Dr. J. Braxton Hicks pointed out the similarity of the cases just related to those he had given in his paper mentioned by Dr. Dunn. But he thought that now, with our improved means of practice, we hardly ought to be so helpless in these cases as the former speakers had supposed. He thought that with the power of dilating the cervix by the dilating bags of Dr. Barnes, which we now possessed, within an hour or two at most we might either apply the forceps or turn the fœtus and deliver; or should rapid delivery not be judicious, we might at least detach the placenta, and thereby take off the local tension from the uterus.

Dr. Graily Hewitt attached much importance to the presence of a painful feeling of stretching or dilatation in the abdomen as a sign of hæmorrhage within the uterus, but from facts which had fallen under his own notice, and which he mentioned, it was not a symptom which was invariably observed, and consequently could not be considered as reliable. It might be absent, and yet with the uterus possibly containing a large quantity of blood. Together with other signs, great prostration and pallidity of surface, the sensation alluded to had, however, much positive diagnostic value.

ON A NEW MODE OF TREATING EPITHELIAL CANCER OF THE CERVIX UTERI AND ITS CAVITY.

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The able papers of Mr. Moore, of the Middlesex Hospital, on cancer, have, I think, established in the minds of most men that, although cancer may, after a time, become constitutional, yet in its early stage, before it has had time to be reabsorbed in the system and poisoning it, it may be considered as a purely local affection. Especially is this true for *epithelial* cancer, a form admitted on all hands as most curable by operation. It is in this belief that the two cases now to be recorded were first operated upon. The third was certainly not cured, but she left the hospital greatly improved. The use of bromine as a local agent was first suggested to me by my colleague Dr. Wynn Williams, who had found it heal an external cancerous sore on the face, although the glands at that time implicated continued to suffer from the disease. He had used it to the strength of ♏ij to ʒj of spirit. So far the merit of its introduction is due to him.

Case 1.—Mrs. M. A. P—, æt. 59, was admitted under my care as a patient at the Samaritan Hospital, on November 24th, 1865. She resides in Camberwell Road now, but has resided at Alexandria, Smyrna, and Constantinople. Generally healthy, only that while in the East she felt always languid. She never had a child or miscarriage; is a nurse by profession, and has frequently nursed her own relatives in serious illnesses, especially her mother, who died of cancer of the womb, aged sixty-six. Has had much anxiety through life. In 1851 she had a flooding, brought on by nursing

her husband, who was afflicted with fits, and about that time had erysipelas in Alexandria, of which he died. In 1852 she had two other attacks of flooding. In 1853 she married a second time, at Constantinople. She was pretty well for two years, when floodings returned, with violent pain at lower part of back and abdomen in front. She occasionally experienced pain during coitus with her second husband; never with the first. Her second husband was killed by an accident early in 1864. She felt the shock dreadfully; the floodings ceased suddenly, being followed by diarrhœa, which continued for twelve months before it finally ceased. From this time she continued pretty well till about six months ago, when the uterine hæmorrhages returned, with great pain of an "aching, dead" character, especially over sacrum and lower part of abdomen. The hæmorrhage has continued with very little intermission, stopping for a few days, recurring at irregular intervals, occasionally offensive.

Present state.—This patient is looking very thin, pale, and haggard, losing blood continually. The external parts are flabby and shrivelled, emitting a carcinomatous odour. The discharge is sanguineo-purulent. A vaginal examination reveals a mass of fungoid epithelial growths, taking their origin from the os, and about the size of an egg. These bleed on the slightest touch, and break down very readily. The uterus itself is movable, but not very freely so; it is large and heavy.

The granulations of epithelioma were broken down, and the actual cautery applied to check the bleeding.

In four or five days the slough was detaching; discharge mostly purulent, offensive, tinged only with blood. Frequent douches to be used.

The slough having now come away, the bromine was used. A solution was made by adding five minims of the pure bromine to fifty of spirits of wine. A piece of lint, the anterior surface of which was well saturated with this solution, was applied to the uterine diseased surface, and kept *in situ* by pledgets of lint. This was left in forty-eight hours. The patient did not complain of pain, but

stated it produced unexplainable sensations all over the body.

The lint and cotton being removed, there was some odour. The surface of uterus was covered with a thick ashy slough, but the bromine appeared to have run a little on one side, and to have produced a slough on vagina. There was, however, no bleeding. Warm douches to be applied, and in interval of night a poultice of lint dipped in warm water.

In about a week's time this second slough had come away, leaving a large cavity with granulations, which looked healthy, but bled on the slightest touch. There was no smell. A small piece of lint, dipped in a saturated solution of tannin in glycerine, was now applied, and repeated every day. A copious watery discharge was induced by it, but free of all smell.

From the period I had begun the bromine I had given the patient internally iodide of arsenic $\frac{1}{16}$th grain, and Ext. Conii three grains, which was persisted in, and only stopped one or two days when she complained of headache. What, however, became remarkable about this woman was the rejuvenescence of her person, and specially of her sexual organs. She stated she felt exceedingly better. The shrivelled appearance of the pudenda had disappeared, and she had filled out here as a young woman.

The wound healed kindly, except in one or two places. I thought it more prudent to destroy a third time. I did so, but I now used a solution of bromine, of ten drops of bromine to fifty of spirit. I applied this more carefully. I placed the lint saturated with the solution in a glass cup, and kept it *in situ* by pledgets of cotton dipped first in a saturated solution of carbonate of soda. This was left in forty-eight hours. By this time a deep hole had been made into the uterus, which was covered by an ashy slough, which came away in about a week. The cavity was partly filled up by healthy-looking granulations. As they bled, however, more than I liked on touch, I applied tannin, and occasionally touched them with nitrate of silver.

The patient had now been under treatment about two

months and nine days, and was fat and hearty, well coloured, and supposed well. In fact, I thought so too. Before, however, she left I thought I would examine her very closely to see if all was right, particularly as there was occasionally a drop of blood which came away. I now found the cause of this. Although the cervix externally was covered with mucous membrane and healthy, I found about one quarter of the lining membrane of uterus was affected with epithelioma. This I was sure of, because on scraping the uterine cavity with the curette I brought away strips of the mucous membrane entire, the upper portion of which was healthy, the latter diseased.

As she had been so long in the hospital, I thought it best to let her go out for a week or ten days. She left March 12th.

She was readmitted April 2nd. I now proceeded to destroy the diseased lining membrane. A piece of wood was prepared about the size of the uterine cavity; this was covered with cotton. The upper part was dipped in a saturated solution of carbonate of soda, the lower in the bromine solution. A piece of string was now attached to the lower portion to pull it out when once applied. It was now placed within the uterus, and kept *in situ* by pledgets of cotton dipped in carbonate of soda solution.

I had intended to keep this in, as before, for forty-eight hours, but it was forced out by a uterine contraction during the night. An attack of diarrhœa synchronously supervened, which was very obstinate, and was not relieved till the 12th of April. The vagina all this while was kept clean by occasional daily douches.

On the 16th April the plug was reintroduced into the uterine cavity.

19th.—Plugs removed. Ashy slough, as before, seen in uterine cavity. One part inferiorly was looking red and inflamed, and bleeding on the slightest touch. To this bromine dissolved in glycerine, but of the same strength as the spirit solution, was applied.

23rd.—The plug was removed. The bromine did not

appear to have acted with anything like the power with which the spirituous solution, when applied, had done. Consequently the latter was used again, and the process was repeated once more. A few granulations made their appearance from time to time. These were touched once or twice with a pencil dipped in the spirituous solution of bromine, a piece of dry lint then being applied to it. The tannin douche was subsequently used, and she left the hospital with a movable healthy uterus the os and lining membrane covered with healthy mucous membrane, she herself fat and hearty, and declaring she had not felt so well for years, on the 21st May.

Case 2.—Mrs. C. C—, æt. 44; married; lives at Welsford; a charwoman by occupation; admitted into the Samaritan Hospital under me, January 20th, 1866. States she has generally been a healthy woman, never having had a day's illness except during her confinement. She has had ten children. Her mother is alive and healthy. She has never suffered in her womb or breasts. Mrs. C— believes her present illness to have resulted from her last confinement. She was under one physician for seven months subsequently, but he never examined her. She was then suffering from a pale offensive discharge, not bloody. He gave her medicines only, and told her it was change of life. Later she consulted Dr. Cox, of Welsford, and he told her that unless a great change took place she could not live long. He recommended her to come into this hospital.

On admission.—Her aspect is very unfavorable; yellow, pale, very thin; looking completely shattered. So weak she walks with difficulty. The smell about her is so offensive that the other patients do not like to sit next to her.

On examination per vaginam.—External parts completely flabby and shrivelled; a large carcinomatous mass, about the size of a large orange, was found attached to the os. They appeared to be large cauliflower excrescences, breaking down readily, and bleeding at the slightest touch, with

carcinomatous odour of an unusually offensive character. This mass was attached to the os uteri, as well as part of the internal cavity. The uterus was, however, movable with it.

On the 26th January I removed this mass with Hicks' wire écraseur; there was no bleeding of any consequence, although towards the close of the process the resistance was marked. I put her at once also on iodide of arsenic and conium, as in the former case. A few days afterwards I applied the spirituous solution of bromine (ɱv. to lv of spirit).

On March 9th the same changes, first into ashy slough; and healthy granulation succeeding its removal was observed.

On the 18th the os had resumed a normal appearance, being covered by mucous membrane. On introducing, however, the sound, the organ bled profusely, and a closer inspection showed there were a few granulations within the os still, extending about half an inch up the cavity, and which appeared covered with small cauliflower growths. These were, as in the former case, removed by Nélaton's curette, the mucous membrane of the fundus coming away quite healthy.

On the 25th a piece of wood covered with cotton, the upper portion of which was wetted by a saturated solution of carbonate of soda, and the latter by a spirituous solution of bromine (gr. x to ɱl of spirit), was pushed within the uterine cavity, kept *in situ* by pledgets of cotton for forty-eight hours. On the 27th they were removed; the vagina appeared at one part somewhat excoriated, but the whole carcinomatous portion was one large slough. Douches of luke-warm water were ordered to be applied.

April 2nd.—This patient has greatly improved in appearance. She is keeping up well. Flesh improving. The external parts have lost all their flabby withered look, and resemble those of a young woman. She herself says she has not felt so well for years. All sloughs inferiorly have disappeared; here and there one or two granulations appeared too high, and were pencilled over with the bromine

solution from time to time, or nitrate of silver. Tannin douches completed the cure. She left the hospital with no traces of disease, moveable uterus covered with healthy mucous membrane, looking fat and hearty, and fully twenty years younger than when she came in.

In a letter since received from Dr. Cox I learn she is continuing well, and that gentleman expresses himself as quite astounded at the result.

Remarks.—I am quite aware that the objection, that two cases afford but an insufficient criterion as to the use of any remedy, and secondly, that time has not been allowed to prove that the cures thus wrought are lasting; that thus it would have been wiser to have waited till more cases had been operated upon, and a longer period had elapsed. These are solid objections, but at the same time there are some considerations which made an early publication of these cases desirable.

1st. The immediate and marked improvement in the general symptoms. I have used other caustics in number—the actual cautery, the knife frequently—but I never saw so rapid a change for the better. The bromine seems not only to arrest the disease locally, but also the cachexia which accompanies it. The appearance of the external pudenda under its use was so remarkable as to strike the attention of all who saw the cases, and I certainly have never observed such a change follow any other treatment under my hands. It closely resembled that following treatment by anti-syphilitics in specific cases.

2nd. The depth to which the caustic pervades cancerous growths is also remarkable, while the vitality of the unaffected parts seemed stimulated to increased reparative activity. In one case, where the entire uterus was affected with cancer, and the cavity especially, and in which I had therefore no hope of cure, even in this case so marked an amelioration in the general health occurred as to raise false hopes in my patient. She left the hospital much improved, with the uterine cavity large enough to admit the finger, and covered with healthy granulations. I have,

however, been unable to learn the subsequent history of this case.

3rd. I have spoken of the bromine as a powerful caustic, and not unattended with danger. It is not only so to the patient if not carefully applied, but to the operator in its preparation. It is well known how very acrid the fumes are; but on admixture with the spirit an explosion may occur, if not mixed gradually. I narrowly escaped an accident myself. I first put in a minim measure ten minims of the bromine, and filled it up with the spirit to sixty minims. Great heat was developed, and I was watching it when the contents in the measure were thrown out forcibly, and just escaped my face and eyes. The fumes, however, thus produced were so powerfully acrid to the eyes and lungs that I was obliged to leave the room. The solution is very volatile even when carefully mixed, and should be either kept in glass-stoppered bottles or, better still, prepared first before employment in another but the operating room.

4th. The spirituous solution I found in my experiments much more powerful than the solution in glycerine, which, however, rather fixes the bromine. This volatility I think it is which enables the agent to permeate more readily the diseased part; but as it may also affect the vagina backwards from running, I look upon the cup in which it is placed, and the cotton dipped in carbonated alkali behind it, as very necessary adjuvants in its application.

5th. The arsenic given I look upon as a useful concomitant. I think I have seen it do good in some cancerous growths. At any rate, affections which appeared indubitably so did not progress under its use. I have also given it in its solid form. I believe that in this way larger doses may be borne. The solid form appears gradually to be assimilated as it descends in the intestinal tract, and does not produce the gastric or ocular annoyances which the liquid form is very apt to produce. I gave the conium as a sedative, and because it seems especially to enjoy a reputation as such in cancer. I look, however, upon its effects as very

inferior to those of the arsenic in its solid form. I may add, as confirmatory of its uses in the solid state, that a physician informed me that for an affection of palmar psoriasis, which resisted all treatment except the arsenical, he could not take this remedy in the liquid form, as it invariably disagreed in the usual way; but gradually was enabled to take as much as a grain and a quarter a day in the solid form for nearly seven years, and thus to rid himself effectively of a disease not only obstinate to a degree in himself, but even hereditary.

I have already apologised for the incompleteness of these remarks; but their publication, if no other good result, will probably lead others to try, and give us the result of their experience at some future day. If it be a potent and useful remedy, as I believe it is, it may prove of advantage to cases which, by a longer reticence on my part for fuller experience, might have been left to other treatment perhaps less efficacious. If it does not cure absolutely, I am sure it arrests the progress of cancer.

Dr. Wynn Williams said that he had applied solutions of bromine, in varying degrees of strength, in cancerous growths where there has been any breach of surface, for some nine or ten years; and for the last two or three years to this disease when attacking the uterus, with the effect of destroying the cancerous mass, and causing its removal by sloughing. The first patient on whom he used it was a man suffering from epithelial cancer, which had commenced in the lower lip, the soft parts having been almost entirely removed; and wherever he was able to apply the solution of bromine the wound healed, until the whole external surface of it, extending, he might say, almost from ear to ear, had skinned over. The patient, however, ultimately died from extension of the disease to the neighbouring glands. Dr. Williams considered the beneficial effects of bromine were not confined to its corrosive or escharotic action only, but it acted also as a most powerful disinfectant, its good effects in this way being of very great service. He had seen patients with that peculiar cachectic, emaciated aspect, so common in those suffering from open cancer, rapidly improve in appearance soon after using bromine applications. This, he believes, is in a great measure due to its disinfectant properties. It combines with the hydrogen of the

noxious gases emanating from these wounds, and whose absorption he believes to be a fruitful source of the symptoms already mentioned. One peculiarity of bromine over other escharotics in cancerous affections is, that it appears to act much more energetically on the diseased tissues than on the healthy ones. Every one using it, however, must be most careful not to let it come in contact with neighbouring structures, or most serious consequences may arise. But, curious to relate, he had injected a strong solution (ten drops of bromine to twenty of spirit) into the hind leg of a dog, after he had been powerfully brought under the influence of chloroform, with the effect of making him groan on its first being injected, and some slight swelling the next two or three days, which soon disappeared, leaving only a slight depression in the spot injected. In dispensary practice it is most difficult to follow up cases. They get cured or relieved, and you see no more of them. He could, however, assert that, in almost every case in which he had been able to apply bromine directly to the cancerous growth, its effects were most beneficial, the patients discontinuing their attendance apparently cured. He also mentioned that he frequently prescribed bromide of iron internally whilst applying bromine externally. Its beneficial effects, however, he thought, were very problematical. He considered the Society greatly indebted to Dr. Routh for laying before them the particulars of these two most interesting and well-authenticated cases, which he hoped would be the means of causing the mode of treatment to be more generally adopted.

Dr. Rogers said he believed some of the previous speakers were labouring under an erroneous impression that the paper by Dr. Routh and the remarks by Dr. W. Williams tended to establish a new "specific for cancer." All that was desired to be made known was the fact that in some cases of epithelial cancer of the cervix uteri the bromine had proved a most energetic and valuable escharotic, destroying vascular growths, arresting hæmorrhage and the prostration resulting from it, and checking all fetid and foul discharges. Healthy granulations followed its application, and the parts appeared free from disease. How long such improved state would continue could not at present be predicted. This was certain, that a most marked improvement took place locally and constitutionally. The patients would soon have died had not the disease been arrested; now they appeared restored to health and strength again. Of course, where the bromine could not be applied to the whole of the diseased parts, the mischief could not be arrested, and the disease proceeded on its fatal course. Bromine, like other powerful caustics, required great care and all the precautions mentioned by the author in its use. From its not being properly guarded, he (Dr. Rogers) had known mischief to arise which ought to have been prevented. He had used it himself, and had assisted the author with all his

cases; and great credit was due to Dr. Routh for the skill, care, and perseverance exhibited by him.

Dr. Routh, in reply, said he had frequently seen cases of extirpation of cancerous growths by the knife or écraseur, but they almost invariably recurred. The plan proposed did more, or supplemented what knives and écraseurs could not do; and he must say he never saw change so rapid from one of marked cachexia to robust health, as under the bromine treatment. It was because he had thought this so remarkable that he wished others to try it also for themselves. If the agent was what he believed, the profession would soon acknowledge it. Herein he only followed the general rule of medical men, which differed so much from that of quacks, to make known at once any remedy for the good of all, and not to keep it secret. Great harm, he believed, had been done to the treatment of this affection in our schools and elsewhere by invariably speaking of cancer as incurable. Now, he believed, opinion was changing, and some began to believe a cure might be found. He did not say that bromine was certainly such a remedy, but at any rate it was the most powerful palliative he had met with. To see a woman dying by inches before you, and carrying about her an odour completing her misery, was a severe trial. If bromine could stop this only for six months, it was surely to be received with thankfulness. Future experience, however, might prove its powers to be even greater than this.

ON THE MECHANISM AND MANAGEMENT OF DELIVERY IN CASES OF DOUBLE MONSTROSITY.

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The mechanism and management of labour in cases of double monstrosity is but briefly adverted to in most of our standard works on obstetrics, probably because the authors have considered that such an unusual event was more a matter of curiosity than of real practical importance. Still, the frequent occurrence of such monstrosities in all our museums, and the very numerous cases that are scattered

through our periodical literature, are sufficient to show that they are not so very rare as we might be inclined to imagine; and as they are likely to give rise to very formidable difficulties in delivery, it cannot be unimportant that we should have a clear idea of the usual course taken by nature in effecting such births, with the view of enabling us to assist in the most satisfactory manner should a similar case come under our own observation.

It needs no arguments to prove that we shall be in a better position to meet the difficulties presented by a monstrous birth of this kind, if we are well acquainted with the mode in which former cases have terminated, than if we trusted only to the inspiration of the moment to guide us.

I therefore make no apology for directing the attention of the Society for a short time to the recorded histories of delivery in such cases, in the hope that they may throw some light on the proper course to pursue when a like complication occurs; and I believe that such an investigation is more likely to lead to useful results than any *à priori* reasoning from our general knowledge of the mechanism of parturition. Unfortunately the authors who have placed on record the birth of double monsters have generally occupied themselves more with a description of the structural peculiarities of the fœtuses than with the mechanism of their delivery; so that, although the cases to be met with in medical literature are very numerous, comparatively few of them are of real value in an obstetric point of view. Still, I have been able to collect the details of a considerable number in which the history of the labour is more or less accurately described; and doubtless a more lengthy research would increase the lists.

Without entering into the elaborate classifications given by Geoffrey St. Hilaire, Allen Thompson, and other writers on the subject, we may for obstetric purposes confine our attention to four principal varieties of monstrosity which are met with far more frequently than any others. These are—

A. Two nearly separate bodies united in front to a varying extent by the thorax or abdomen.

B. Two nearly separate bodies united back to back by the sacrum and lower part of the spinal column.

C. Dicephalous monsters, the bodies being single below, but the heads separate.

D. Bodies separate below, but the heads fixed or partially united.

Each of these divisions forms one of the classes given by Allen Thompson in his valuable paper in the 'Monthly Journal of Medical Sciences,' but they by no means include all the varieties of monsters we may possibly meet with. They do, however, include all that are likely to give rise to much difficulty in delivery; and all the cases I have collected may be placed under one or other of them.

The first point that strikes us in looking over the history of these deliveries is the frequency with which they have been terminated by the natural powers alone, without any assistance on the part of the accoucheur. Thus, out of the 31 cases I have collected, no less than 12 were delivered naturally, and apparently without much trouble. Nothing can show better the wonderful resources of nature in overcoming difficulties of a very formidable kind.

It is pretty generally assumed by authors that in such cases the children are necessarily premature, and therefore of small size, and that delivery before the full term is rather the rule than the exception. Dugés states that the children are often dead, and that putrefaction has taken place, which facilitates their expulsion. Both of these assumptions seem to me to have been made without sufficient authority, and not to be borne out by the recorded facts. In only one of the 31 cases is it mentioned that the children were premature. In that labour came on only twenty days before it was expected. In another it is said that the child was most probably premature, because the labour was effected without much difficulty; but this was clearly only an attempt to suit the facts to a preconceived theory. In many it is incidentally observed that the patient was at the

full time, and I think we must assume that it was so whenever prematurity is not expressly mentioned, as we certainly would in treating of any other complication. Nor is there any sufficient reason that I can see why labour should commence before the full term of gestation is accomplished.

By far the greatest number are included in the first class—those in which the bodies are nearly separate, but united by some part of the thorax or abdomen. This is the division to which we would refer the celebrated Siamese Twins, an account of whose birth, I may observe, I have not been able to discover. Out of our 31 cases of double monstrosity, 19 are included under this heading. The details of the labours are briefly as follows:—1 died undelivered; 8 were terminated by the natural powers, in 3 of which the feet and in 3 the head presented; in 2 the presentation is doubtful; 6 were delivered by turning, or by traction on the lower extremities; 4 were delivered instrumentally.

The case in which the patient died undelivered is of old date, and the account of the labour is not accurate. It is happily the only instance I have been able to meet with in which either nature or art has not succeeded in effecting delivery.

In three cases in which the feet presented, delivery was accomplished by the natural powers without any particular difficulty. The most accurately described of these is by Fanzango, who gives an account of two children who were born alive at Camignone on the 6th of November, 1802. The bodies were entirely separate, but they were united by the upper part of the abdomen. The four feet presented together, and delivery took place after a severe labour lasting three hours. Fanzango says—"It was a happy circumstance for the mother that she was not under the charge of a practitioner with his head full of the doctrines of the surgeons on the subject, otherwise he probably would have performed some severe and dangerous operation, mutilating the children, with the view of aiding delivery." These children lived for some years, and were exhibited in Italy.

In other two instances, cited by Asdrubali and Le Sauvage, the labour seems to have been even more easy than the above.

The cases in which version was resorted to also terminated very favorably, and with comparative facility; and as regards the mechanism of their delivery, they are evidently identical with those in which the feet originally presented.

Perhaps the best account of the mode in which delivery has been effected when version was performed is contained in the cases related by Drs. Brie and Molas, who detail very fully the history of the instances that come under their notice.

Molas's case occurred in a healthy multipara, æt. 32. The labour commenced at 7 p.m. on the evening of the 15th of August, 1822, and at 6 a.m. on the morning of the 16th, the os being fully dilated, the membranes were ruptured. Two heads now presented simultaneously at the brim of the pelvis, and he made numerous efforts to push one out of the way, so as to allow the other to descend; but after an hour of strong pains he desisted, as no progress had been made. Suspecting union of the bodies, he determined to turn, and found, on introducing his hand, that the children were united by the thorax. He then brought down the feet of both. The bodies were delivered with ease, and the arms came down of themselves; but considerable difficulty was experienced in extricating the heads, which was only effected by pulling the bodies of the children well over the abdomen of the mother, so as to get the posterior head to engage first in the pelvis.

In Dr. Brie's case two feet originally presented; but the midwife in attendance could not get the bodies delivered beyond the knees. When M. Brie was sent for, he immediately recognised that the feet belonged to different children; the heel of the right foot being turned to the symphysis pubes, that of the left to the coccyx. He then tried to replace the posterior foot, so as to bring down the left foot corresponding to the right one already born. This he succeeded in doing, and by continued traction delivered the first child as far as the loins, beyond which it would not

pass. By this time he was able to feel the point of junction at the sternum; so he reintroduced his hand and brought down the feet of the second child, and then by steady pulling succeeded in delivering the bodies as far as the heads. Beyond this point direct traction effected no progress; but, just as in Molas's case, by turning the bodies of the children over the abdomen of the mother, the posterior head became engaged in the pelvis, and after it was delivered the second easily followed.

The comparative facility with which these labours have terminated in feet presentations, whether original or produced by turning, is therefore abundantly evident, and it is fortunate that the feet seem often to present naturally. The inference of course is, that version should be resorted to whenever any other presentation is met with in the case of double monstrosity of this type; but unfortunately this rule could but rarely be carried into execution, since we possess no means of diagnosing the junction of the fœtuses at a sufficiently early stage of labour to admit of turning being performed. It is only under exceptionally favorable circumstances that this can be done; as, for example, in Molas's case, in which both heads presented, but neither would enter the brim of the pelvis. The great difficulty must of course be in the delivery of the heads; for in all the recorded cases, with one exception, the bodies have passed through the pelvis parallel with each other with comparative ease until the necks appeared, and then, as a rule, they could be brought no further.

It is clear that the remainder of the fœtus can no longer pass simultaneously, and, were direct traction continued, the heads would be inextricably fixed above the brim. In accordance with the direction of the pelvic axes, the posterior head must first engage in the inlet; and in order to effect this it will be necessary to carry the bodies of the children well over the abdomen of the mother, as was done in the two cases I have quoted. This seems to be a point of primary importance. It would also be advisable to see that the bodies should be made to pass through the pelvis with their

backs in the oblique diameter. By this means more space is gained than if their backs were placed antero-posteriorly, while at the same time there is less chance of their heads hitching against the promontory of the sacrum and symphysis pubis, which otherwise would be very apt to occur.

Three cases are recorded in which the labour was terminated by the natural powers when the head remained the presenting part. This seems to be accomplished in one of two ways. In the first and most common, the breech and legs of the child whose head and shoulders were first born are subsequently pushed through the pelvis by a process similar to that of spontaneous evolution, and afterwards the second child probably passes footling without much difficulty.

It was in this manner that delivery apparently was effected in three cases in which the first child's head was extracted by the forceps. One such is recorded by Dr. Lyell, of Edinburgh, and another by M. Letouge, of St. Lo. In the latter the presenting head was delivered with difficulty by the forceps, and the body followed after some time with the aid of traction on the axillæ; the hand was then passed up, and the feet of the second child brought down. In this instance the children were premature by twenty days, and were unusually small; and it is to be inferred, that to admit of such a termination to the delivery, the point of junction must be lax and flexible, for were the bodies closely united, it would be impossible for one to be so much separated from the other as such a mechanism would require.

Barkow, however, cites a case in which *both* heads were delivered by the forceps, the bodies subsequently passing simultaneously. Two instances are also recorded by Messrs. Hanks and Jay in the third and sixth volumes of our 'Transactions,' in both of which delivery was accomplished by nature; one head being born immediately after the other, the bodies subsequently passing simultaneously. In Mr. Hanks's case it is mentioned that, passing his finger over the presenting head, he felt "a soft, convex substance" closely applied to the upper part of the chest of the infant. This he ascertained to be the caput succedaneum on the

head of another child. It appears, therefore, that when delivery takes place in this manner, the head of the second child must fit into the cavity formed by the neck of the first, and the pelvis must necessarily be sufficiently roomy to admit of the expulsion of the head of the second child, whilst its cavity is diminished in size by the presence within it of the neck and shoulders of the first. Either of these processes, therefore, must require exceptionally favorable conditions as regards the size of the child and of the pelvis; and the difficulty in the way of delivery must be very much greater than when the lower extremities present. In the event of its being found impossible to effect delivery after a considerable portion of the bodies are born, no resource remains but the mutilation of the body of one child, so as to admit of the passage of the other. This was found necessary in one case in which the children presented by the feet, and were born as far as the thorax, but could be got no further. The body of the anterior child was removed *en masse* by a circular incision as far as it had been expelled, which allowed the remaining portion, consisting of the head and shoulders, to re-enter the uterus, after which the posterior child was easily extracted, the mutilated fœtus following it without difficulty.

In Class B, in which the children are united back to back, I have the record of three cases, all of which were delivered by the natural powers. In one the presentation is not mentioned, but in the other two the head came first. One of these is the case of Judith and Helène, the celebrated Hungarian twins, who lived to the age of twenty-three. Helène was born as far as the umbilicus, and after the lapse of three hours her breech and legs descended. Judith was expelled immediately afterwards, her feet descending first. Exactly the same process occurred in the case described by M. Norman, the children being also born alive, and dying on the ninth day.

It is probable that labour is easier in this class of monstrosity than in the former, because the children are so joined that there is no necessity for the bodies to be parallel to each other during birth when the head presents, and

after the birth of the head and shoulders of the first child its breech and lower extremities are evidently pushed down and expelled by a process of spontaneous evolution. If the feet originally presented, the mechanism of delivery and the rules to be followed would be the same as in Class A; but the difficulty would probably be greater, since the junction is not so flexible, and a more complete parallelism of the bodies would then be necessary during extraction.

In the class of dicephalous monsters I have found the description of seven cases, two of which were terminated by the natural powers. Here again the process of spontaneous evolution was the main agent in delivery, for in both one head was first born and became fixed under the arch of the pubes the body being subsequently pushed past it, and the second head following without difficulty. A sufficient time might therefore probably be given to allow nature to accomplish this process; but failing this, the proper course to pursue is clearly to decapitate the first-born head, and then bring down the feet of the child, when delivery can be accomplished with ease. This was the course adopted in two out of the seven cases, and it may be done with the less hesitation since from their structural peculiarities it is extremely improbable that monsters of this description should survive. This is a preferable practice to that adopted by Hesseus, and reported by Barkow, who, after the extraction of the first head by the forceps, managed to hook down the second by the finger passed over its neck, until it also came within reach of his forceps and was extracted. The difficulty of performing such an operation and the increased risk to the mother would necessarily be very great.

If the feet originally presented, as in the case reported by Dr. Baerstler, we should endeavour to engage the posterior head first in the cavity of the pelvis by pulling the body well over the body of the mother, in the same manner as has been found to be useful in Class A; and failing this, decapitation or evisceration would be necessary.

Monstrosities of Class D, in which the bodies are separate,

but the heads more or less fused or united, appear to be the most uncommon of all; and I can find the description of delivery in only two cases.

One of these is described by Dethardingus, and the delivery seems to have been accomplished with considerable difficulty. The bodies in this instance were completely separate, but there was only one large head, which presented. The patient had been in labour for four days; the forceps had been applied in vain, and the perinæum had been extensively lacerated. Dethardingus was then called in, and perforated and broke down the skull. Subsequently he got down an arm by the blunt hook, and amputated it. This gave room for the introduction of the hand, and first one foot and then the other of the mutilated fœtus was brought down, the body of the second child following.

The second case is described by Vottem. One child was only imperfectly formed, the limbs being absent. The shoulder presented, and version was performed, the body of the second child following the head of the first.

We should scarcely expect to meet with as much difficulty as occurred in the first of these two cases in the delivery of monsters of this type; for if the head presented and would not pass, we should naturally perform craniotomy; and after the head has been lessened in size, it is not easy to see why there should be such extreme obstruction to the passage of the bodies.

If the nature of the monstrosity could be recognised sufficiently soon, the best practice would doubtless be to bring down the feet of both children and to extract the bodies simultaneously, which can be effected, as we have seen in Class A, with comparative ease. After the birth of the bodies, delivery of the monstrous head could readily be accomplished by perforation.

The results to the mothers in all these cases seem to have been very favorable. There is only one in which the death of the mother is recorded; and although in many the result is not mentioned, we may fairly assume that recovery took place.

I have thus analysed briefly the history of all the cases in which I have been able to find the birth of such monstrous twins described; and the practical deductions to be gathered from the facts before us may be summarised as follows:

1. Of the various classes of monstrous twins, those in which the bodies are joined by the sternum or abdomen are much the most common.

2. The most favorable presentation is undoubtedly that of the lower extremities; and if the head present, and the nature of the monstrosity can be recognised, turning should be resorted to, and the feet of both children brought down into the pelvis.

3. The bodies can generally be extracted without much difficulty by direct traction until the shoulders have passed. In doing this, the backs of the fœtuses should be placed in one of the oblique diameters of the pelvis.

4. The bodies should then be turned well over the abdomen of the mother, so as to cause the posterior head to pass first into the cavity of the pelvis. If this cannot be effected, the anterior body must be amputated, when the other will probably pass without difficulty.

5. If the head presents, the body corresponding to the first-born head may be expelled by a process similar to that of spontaneous evolution, or the second head may be expelled with its occiput fitting into the cavity formed by the neck of the first child. Failing either of these terminations, mutilation of the fœtuses will be required.

6. In Class B, in which the children are joined back to back, the mechanism of delivery is essentially the same as in Class A, whether the head or feet present. But evolution of the body of the first-born child in head presentations is probably accomplished with greater ease.

7. In Class C, after the birth of the first head, the body must be expelled by evolution. If this is not accomplished, it will be advisable to decapitate the first-born head, and to terminate the labour by bringing down the feet of the child.

8. In Class D, when either the head or feet present, if the head causes obstruction, it must be lessened by perfora-

tion, when, in all probability, there will not be much difficulty experienced in effecting the birth of the bodies.

APPENDIX.

REFERENCE TO CASES OF DELIVERY OF DOUBLE MONSTERS.

CLASS A. *Two nearly separate bodies united in front to a varying extent by the thorax or abdomen.*

No.	MODE OF DELIVERY.	REFERENCE.
1.	Died undelivered.	John Adamus Kulm, 'Descriptio Anatomica-physiologica Fœtus monstrosi,' 1724.
2.	Extracted by traction on lower extremities of both children.	M. Brie, 'Bulletins de la Faculté de Médecine,' vol. iv.
3.	Feet presented. By natural powers.	Fanzango, 'Storia del mostro di due corpe.' Padua, 1802.
4.	Both heads extracted by the forceps.	Barkow, 'De Monstr. Animalium duplicitate.'
5.	Feet presented. No advance beyond thorax. Amputation of body of anterior fœtus.	Huron, 'Archives Générales de Médecine,' 1847.
6.	First head extracted by forceps; then feet of children brought down.	Lyell, 'Monthly Journal of Medical Science,' Aug. 1848.
7.	Traction on lower extremities of both children.	Derien, 'Gaz. Méd. de Paris,' 1848.
8.	Feet presented. Natural powers.	Asdrubali, 'Trattato di Obstetricia,' vol. iii, p. 172.
9.	Head presented. Version.	Do. do.
10.	By natural powers.	Askham, 'Lancet,' 1848.
11.	Head presented. Version.	Molas, 'Mém. de l'Acad.,' vol. i.
12.	Feet presented. Natural.	Le Sauvage, 'Arch. Gén. de Médec.,' 1848.
13.	First head delivery by forceps. Body passed by evolution. Second body removed by version.	Letouge, of St. Lo. do. do.
14.	Breech presented. Traction on lower extremities.	Tanner, 'Obst. Trans.,' vol. ii.
15.	Head presented. By natural powers.	Hancks, do. do., vol. iii.
16.	Head presented. By natural powers.	Jay, do. do., vol. vi.
17.	Natural powers.	'Bulletins de la Faculté,' vol. iv.
18.	Natural powers.	Do. do.
19.	Feet presented. Delivered by traction.	'Obst. Trans.,' vol. vii.

CLASS B. *Two nearly separate bodies united back to back by the sacrum and lower part of spinal column.*

No.	MODE OF DELIVERY.	REFERENCE.
1.	Natural powers.	'Philosophical Trans.,' abridged.
2.	Head presented. Natural powers.	Norman, 'Bulletins de la Faculté,' vol. vi.
3.	Head presented. Natural powers.	'Philosophical Trans.,' vol. l.

CLASS C. *Dicephalous monsters, the bodies being single below, but the heads separate.*

No.	MODE OF DELIVERY.	REFERENCE.
1.	A head, and one arm born naturally. Decapitation. Version.	Ratel, 'Bulletins de la Faculté, vol. vi.
2.	First head delivered by forceps. Neck of second head pulled down by finger. Forceps.	Hesseus, quoted Barkow, op. cit.
3.	First head born naturally. Body expelled by evolution, then the second head.	Brownlow, 'Ed. Med. and Surg. Journ.,' vol. lv.
4.	Head presented. Version.	Peu, 'Traité d'Accouchements.'
5.	One head, born naturally. Decapitation. Version.	'Gazette Medica di Milano,' 1844.
6.	Head, born naturally. Body expelled by evolution.	Meigs, 'Treatise on Obstetrics.'
7.	Breech presented. Delivered by traction on body.	Baerstler, 'American Journ. of Med. Science,' 1855.

CLASS D. *Bodies separate below, but the heads fused or partially united.*

No.	MODE OF DELIVERY.	REFERENCE.
1.	Head drawn down by forceps; then perforated. Arm brought down by blunt hook and amputated. Version.	Dethardingus, quoted by Barkow, op. cit.
2.	Arm presented. Version.	Vottem, 'Description de deux Fœtus réunis par la Tête.' Liège, 1828.

NOVEMBER 7TH, 1866.

DR. R. BARNES, President, in the Chair.

Present—55 Fellows and 4 visitors.

Dr. Percy Boulton was admitted a Fellow of the Society.

Prof. Mattei, of Paris; Dr. Belcher, Bristol; Dr. H. J. Bransom, Scarborough; Dr. W. H. Strange, Belsize Park, and Mr. A. B. Steele, Liverpool, were elected Fellows of the Society.

A NEW TROCAR AND CANULA FOR TAPPING AND WITHDRAWING THE CYSTS IN OVARIOTOMY.

By GUSTAVUS C. P. MURRAY, M.D.,

OBSTETRIC PHYSICIAN TO THE GREAT NORTHERN HOSPITAL; PHYSICIAN TO THE BRITISH LYING-IN HOSPITAL; HONORARY SECRETARY TO THE OBSTETRICAL SOCIETY OF LONDON, ETC.

THE annexed woodcuts (fig. 21) represent the instrument which I have had made by Messrs. Mayer & Meltzer, of Great Portland Street.

Fig. 1 shows the trocar and canula ready for use.

Fig. 2 is the canula after it has been introduced into the cyst.

Fig. 3, section of canula showing mechanism of bracket.

The chief points of novelty and value about this instrument are—1st, the slit in the tubing through which the trocar enters, and which immediately closes after its withdrawal; 2nd, the self-acting brackets, or pieces of steel bent at a right angle, fastened to the canula by a moderately stiff joint; and 3rd, the extreme simplicity and lightness of the whole instrument.

In fig. 1 the limb of the bracket, marked *a*, drops down as the canula enters the cyst; *b* now being within the cyst-wall, a ring (*c*) is made to pass over the ends (*a*), fixing the brackets, which become immovable, as in fig. 2, and the cyst is secured.

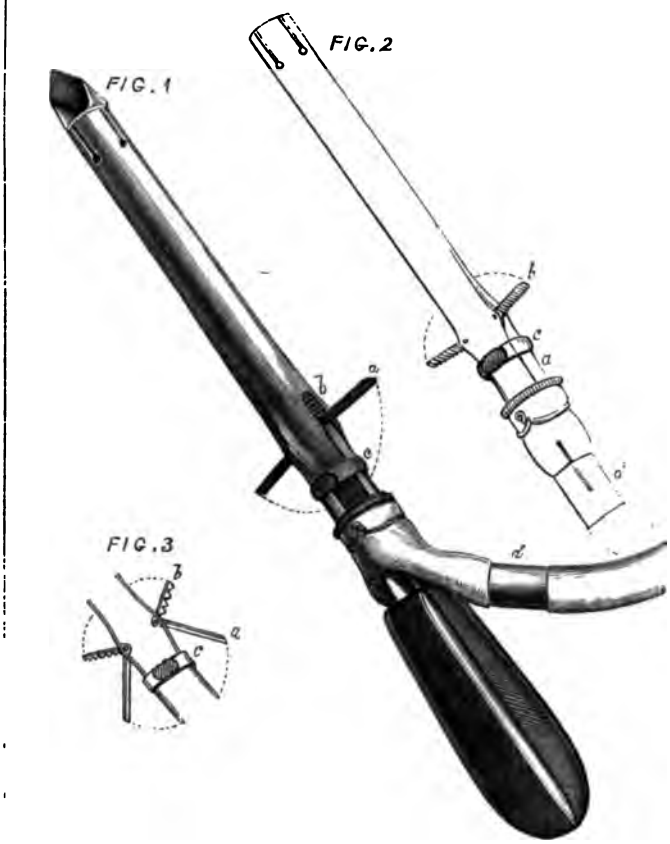
The trocar should not be completely withdrawn until the arms of the brackets (*b*) are within the cyst and the other ends secured by the ring.

To prevent any possible leaking through the slit in the tubing, a broad ring (*d*) is pulled over it after the removal of the trocar.

Should it be desirable to remove the canula, it is easily done by drawing back the ring *c*, and the bracket will take the position as seen in fig. 1.

This instrument has been used by myself on two or three occasions, and also by Dr. Tyler Smith and Mr. Jardine Murray, of Brighton, answering well all the purposes for which it was constructed.

FIG. 21.



ACEPHALOUS MONSTROSITY; ABSENCE OF ABDOMINAL COVERING.

Exhibited by Dr. Graily Hewitt.

The specimen was sent to me by my friend Dr. J. B. Maurice, of Marlborough, who gives the following account:

"I was sent for to a woman who had a midwife in attendance. The patient had lost a quantity of blood during the day. I found the placenta covering the whole of the os uteri. I immediately delivered the patient of the monster I now send you."

The monster is a female; the cranial vault is entirely wanting; a thin loose membrane extends over the base of the cranium to the vertebræ. The upper part of the vertebral column is almost close to the forehead. The limbs are

Fig. 22.

tolerably well formed. The skin of the abdomen anteriorly is deficient, and the stomach, intestines, spleen, and liver are quite external to the body.

The principal features in this specimen are represented in the accompanying illustration (fig. 22).

CASE OF HÆMORRHAGE DUE TO RETAINED PLACENTA, SUPPOSED TO BE THE PLACENTA OF A PREVIOUS ABORTION.

By A. Wynn Williams, M.D.,

PHYSICIAN TO THE SAMARITAN FREE HOSPITAL, AND PHYSICIAN-ACCOUCHEUR, ETC, TO THE WESTERN GENERAL DISPENSARY.

On Tuesday, May the 8th, when seeing patients at the dispensary, I was urgently requested by a clergyman in the neighbourhood to go and visit Mrs. B—, who was said to be dying of hæmorrhage. I went at once, accompanied by the House-Surgeon, Mr. Shone. Found her lying extended on the bed, faint and almost pulseless. Was informed that she had been delivered of a child at full period on Friday, April the 13th, after an ordinary labour, by a gentleman from a neighbouring hospital, and had lost but little blood during confinement; but that there had been a constant discharge more or less ever since. I was also informed that "everything" had come away; the nurse who burned the placenta remarking that it was a very large one.

On making an examination per vaginam, I found the pelvis filled with coagulated blood. After clearing the whole away, I found a substance protruding through the os uteri. I was unable to satisfy my mind as to the nature of it—whether it was in fact a polypus, or a partially everted uterus. I considered, however, that in her then state it would be unjustifiable to attempt any operative procedure. I sent for some terchloride of iron, and making a solution of about a drachm to seven of water, saturated a sponge of about the size of an orange with it, passed this well up against the os uteri, filling the vagina firmly with old linen. By these means the hæmorrhage was restrained. I had previously given the patient a considerable quantity of brandy, which I ordered to be continued in half-ounce doses every half-hour. On visiting the patient later in the evening, I found that she had rallied considerably, and was quite

conscious. I ordered the brandy to be continued, together with arrow-root, beef-tea, &c. On the following morning the patient was still more improved, and continued to improve during the day. She was ordered to continue the same treatment, but to take the brandy every hour instead of every half-hour. On the 10th, the third day of my seeing her, I found her so much better, that I determined to put her under chloroform, remove the sponge, &c., and endeavour to return the uterus should the tumour prove to be a partially everted uterus, or if a polypus, to remove it. She was placed under chloroform by Mr. Shone, whilst I removed the sponge, &c. No hæmorrhage had taken place since my first visit. On introducing my two fingers into the vagina, I felt a somewhat irregular mass protruding through the os; but whether it was a polypus, or the uterus partially everted, I could not make up my mind. I therefore sent to ask my friend Dr. Routh to come and give me the benefit of his opinion. After introducing his hand into the vagina, he expressed his opinion that it was a polypus; and as a portion was without difficulty broken off, he thought it might be fungus hæmatoides. But, on a cursory examination, it had all the appearance of a piece of placenta. (That it was so, was afterwards confirmed by microscopic examination, and a portion is on the table for the inspection of the Fellows of the Society.) It was then decided that I should introduce my hand into the uterus, which with some little trouble I succeeded in doing. The fundus of the uterus was found to be widely dilated, the hand moving about readily in a large smooth open space, conveying the impression that I might possibly be in contact with the peritoneum. Towards the lower part of the uterus, on the right side, was felt a roughened semi-solid mass firmly adherent to the wall of the uterus, and extending to the os. This I satisfied myself could not be with safety removed; but I was enabled to remove a smaller portion attached close to the os on the left side. This state of things was afterwards verified by Dr. Routh. We therefore determined not to attempt its further removal, more particularly as no portion now protruded

through the os. A sponge saturated with the solution of terchloride of iron was reintroduced, together with the plug. The patient was much reduced; was ordered brandy-and-water, beef-tea, &c. &c., and to take every four hours a drachm of the ethereal juice of ergot. On the following day she had again rallied; had passed a tolerable night, and had taken nourishment and stimulants freely; the bowels also had acted naturally; no hæmorrhage; had suffered a good deal from "after-pains." As the uterus was now pretty firmly contracted, she was ordered the ergot in half-drachm doses only. She continued to improve through that and the following day. The ergot was now discontinued, and on the 13th the sponge was removed; no hæmorrhage. The patient had up to this time required the frequent introduction of the catheter; but there was now no further necessity. As there was considerable fetor, the vagina was ordered to be well washed out with a weak solution of iodine three times a day, with the effect of entirely removing all smell. She has continued to improve up to the present time with nourishing diet, stimulants, bark, steel, and an occasional opiate, without any serious drawback, although living in a low confined cellar, with some five or six human beings sleeping in the same room with her.

On making further inquiries of the patient when she had somewhat recovered, I learned that she was thirty-seven years of age, the mother of eight children, and had always had favorable-deliveries; that nine months previous to becoming pregnant of her last child, she had aborted at two or three months; and that at each menstrual period she had lost much more blood than she had previous to the miscarriage, and always felt what she termed a fulness in the parts. She, however, became pregnant in July, about nine months after the miscarriage, and went her full time. She stated that the gentleman who attended her remarked that there was a second child, but afterwards said it was not so, and that all was right. She was, as before stated, delivered on the 13th of April, and got up on Monday, the 23rd, ten days after her confinement. The following day she lost

a good deal of blood, and sent to the hospital for the doctor, who visited her and prescribed for her; not the one who attended her in her confinement. On the Wednesday week, May the 2nd, again lost a large quantity of blood. Another doctor saw her, who also prescribed for her. The hæmorrhage never ceased, but got a little less. Was again visited by the doctor, who told her to keep quiet in bed, but did not examine her. On Tuesday, the 8th of May, the day on which I first saw her, she stated, "I felt better; still bleeding, though not so bad. In dressing, before putting my feet to the ground, felt something give way, snap, and a flow of blood took place, flooding the room. I threw myself as quickly as possible on the bed,"—in which position I found her.

Can it be that the portion of placenta removed was that belonging to the previous abortion, retained, being adherent to the uterus, and becoming still more closely attached until it became almost part and parcel of it; the pregnancy subsequently taking place?

In conclusion, I would remark how absolute is the necessity in every case of continued hæmorrhage to make a vaginal examination, so as to ascertain the source of it.

CASE IN WHICH THE RIGHT ARM OF THE CHILD WAS EXTRUDED THROUGH THE ANAL ORIFICE DURING LABOUR.

By Henry E. Eastlake, L.K.Q.C.P. Irel.;

FELLOW OF THE KING AND QUEEN'S COLLEGE OF PHYSICIANS, DUBLIN; PHYSICIAN TO THE BRITISH LYING-IN HOSPITAL, ETC.

Mrs. G—, æt. 26, has been married ten years. The history of her previous confinement is briefly as follows:

Her first child, a girl, was born at the eighth month of pregnancy, and the labour was an easy one.

The second child was a male infant, born at the full time; forceps were used.

The third child was a girl, and born also at the full time.

The fourth, a boy, also at full time.

After her fourth confinement she came under my care. She had then no notion of the true nature of her disorder. She told me that since her second labour she has not been able to retain the fæces, and that the motions and wind also frequently escaped per vaginam.

On examination I found that a laceration existed which involved the perinæum, a portion of the posterior vaginal wall, and the sphincter ani. I at once urged her to undergo an operation, which she consented to do, and which was ultimately performed by Mr. Lane in St. Mary's Hospital. The pregnancy following the operation terminated in a miscarriage.

Some time after this she again visited me in doubt as to whether she was in the family way. I found her to be between the fourth and fifth month of gestation. The normal calibre of the vagina had become greatly diminished, the result, of course, of the operation. Believing that some difficulty might arise if she went to the full time, I advised her to have labour induced at the seventh or eighth month. This she neglected to do, and I did not see her again until I was summoned on the 8th of October by the midwife who was attending her in her confinement, at the full period of pregnancy.

On my arrival I found that the whole of the right arm was protruding through the anal orifice. Upon examination per vaginam, I came upon the head very low down, and placed in the first position.

Strong uterine action was going on, and, as I felt that the head would rapidly be expelled, I directed the midwife to press back the arm steadily through the anal orifice as the head descended. This she did, and the child was born almost immediately. It was a male infant, and showed no signs of life for two or three minutes, but was ultimately thoroughly resuscitated. I extracted the placenta without

any trouble. I conclude that the presentation was primarily a "hand and head," and that as labour progressed the arm descended with the head, and was at length forced through a weak portion of the posterior vaginal wall, and in this manner escaped through the anus. The patient has made a very tolerable recovery, and is now out of bed.

Mr. Nunn has visited the patient once or twice since her delivery, and made a very careful investigation. I will therefore conclude the account of this case by giving briefly his description of the lesion as it exists at present.

The fourchette and about an inch of the perinæum (both restorations by the operation of Mr. Lane) remain entire. Behind this is an irregular edged laceration, which, extending through the sphincter ani, reaches about an inch up the anterior wall of the rectum and recto-vaginal septum.

The unlacerated portion of the perinæum above named constitutes a transverse bridge, which does not appear to be more than a quarter of an inch in thickness. The finger passed into the lacerated anus, travels behind the bridge upwards of course into the vagina.

The patient believes that since her confinement the laceration has partially healed, especially that division of it that extends through the recto-vaginal septum.

Mr. James Lane was interested in the case just related, having operated on the patient some years since for laceration of the perinæum. From the description of her present condition the perinæum seemed to have been but little damaged, but the thrusting of the child's arm through the recto-vaginal septum had occasioned a recto-vaginal fistula. He thought it would be found very difficult to close the fistula completely with the new perinæum in front of it, and the treatment which he should suggest would be to cut through the perinæum, laying it open into the fistula. He would then, by a first operation, bring together the edges of the recto-vaginal septum by sutures in the longitudinal direction, and when this had been accomplished he should repeat the operation for restoration of the perinæum. He had performed this double operation in several cases of ruptures of the perinæum accompanied with laceration of the recto-vaginal septum, with the most satisfactory results. If attempts were made to remedy these

severe forms of laceration by one operation there was great risk of a recto-vaginal opening being left behind the new perinæum, while the denudation of the sides of the vagina necessary to avoid this tends to produce such a diminution of the outlet that the parts are very likely to give way in a subsequent delivery.

CONTRIBUTION TO THE PATHOLOGY OF PUERPERAL ECLAMPSIA.

By J. Braxton Hicks, M.D., F.R.S., F.R.C.P., &c.,

CO-LECTURER ON MIDWIFERY AND ASSISTANT PHYSICIAN-ACCOUCHEUR AT GUY'S HOSPITAL; PHYSICIAN TO ROYAL MATERNITY CHARITY; EXAMINER IN MIDWIFERY AT UNIVERSITY OF LONDON; ETC.

The present imperfect state of our knowledge respecting the pathology of puerperal convulsions has induced me to bring before this Society certain facts in connection with this disease which I think have hitherto been unnoticed, but which are of importance to be borne in mind when we endeavour to discover the cause of these attacks; particularly as the real value and relative frequency of these points have not yet been ascertained: and therefore I need scarcely apologise, if, in presenting them to your notice, I do not attempt to build any theory upon them.

It may be well, however, before stating them, to call to mind the state of our present knowledge of the phenomena which are found in connection with eclampsia of the pregnant or puerperal woman.

When Dr. Lever, in 1843 ('Guy's Hospital Reports,' 1843), first showed the connection between albuminuria and puerperal eclampsia, his discovery was soon confirmed by numerous observers, both at home and abroad, whose names need not here be mentioned; and the almost constant presence of albumen in the urine of the convulsed patient gave, in the then state of our knowledge, strong support to the opinion that the condition was one of uræmic poisoning.

For sixteen years before this Bright had put forth to the world his account of that disease which now passes by his name; namely, where albuminous urine was found associated with disease of the kidneys, and in which Christison showed an excess of urea was retained in the blood.

As many patients suffering under these conditions died in a state of eclampsia, it is highly probable the discovery of albumen in those attacked by puerperal convulsions was in a great measure owing to the knowlege of these facts, especially as Bright had been attached to the same school. However this might have been, it was noticed that albuminous urine was intimately associated with eclampsia of the pregnant or puerperal woman; and it was soon generally believed that these attacks were the result of uræmia: for inasmuch as anasarca had been present in many of these cases before the convulsions had begun, it was inferred that the eclampsia resulted from the association of Bright's disease with pregnancy.*

Again, it was supposed by Frerich that the symptoms of Bright's disease were owing not so much directly to the presence of urea in the blood, as to its decomposition into carbonate of ammonia. In this view he was followed by a considerable number of writers, and numerous supporters exist at the present time. But when Dr. Richardson † published the result of his researches, and showed that ammonia could be detected in the expired gases and in the blood of the healthy, and that it might be considered a normal constituent of the blood, some doubt entered the minds of observers as to the importance of Frerich's suggestion.

It is true that many investigators,‡ by experiments on animals after removal of the kidneys and injection of urea

* See Frerich, 'Die Brightsche Merenkrankheit,' &c., 1851, p. 211, "Die Brightsche Krankheit der Schwangeren."

† See 'Astley Cooper Prize Essays.'

‡ Stokvis, "On Urea as a Cause of Uræmia," 'Nederl. Fijdschr.,' 1860; Schmidt's 'Jahrb.,' vol. cxviii, p. 26; Feldmann, 'Bayer Intell. Be.,' 1861; Petroffa, "On Uræmia," 'Virchow's Archiv,' xxv, p. 91, 1862.

into the veins, came to the same conclusion as Frerich; yet it must be admitted that unless it could be proved that there was present in the blood more ammonia than normal, it could not be considered as a cause of the symptoms observed.

Now, experiments have been instituted to clear up this matter. Dr. Hammond, of the University of Maryland,* in a long paper on the subject, gives the results of his experiments. He tried many plans; in some injecting at once large quantities of urea into the blood; in others throwing in smaller quantities, but more frequently; in others removing the kidneys, and watching the effect; and also, after removal of kidneys, injecting urea and urine into the veins. He examined the amount of ammonia in the breath and blood before the operation, and came to the conclusion that the extirpation of the kidneys and the injection of urea into the circulation did not cause an increased quantity of carbonate of ammonia; and he, so far as his experiments went, considered there was no evidence to cause us to believe that urea did at all decompose into carbonate of ammonia: consequently, that Frerich's theory—namely, that the symptoms of uræmic poisoning were produced, not by urea directly, but by its decomposition into carbonate of ammonia—was not borne out by experiments. These experiments are important, and appear to be conclusive.

There was another point, the importance of which I will allude to later on, which was elicited by these experiments; it had been noticed by others, but clearly shown here; viz., that when the kidneys were extirpated, at least twenty-four hours elapsed before any symptoms of poisoning appeared: sometimes it was two or three days before they occurred.

If, then, these experiments, which appear to have been very carefully carried out, are free from error, then it is clear those experiments which have gone to support Frerich, and to prove the presence of carbonate of ammonia, do not really do more than prove what had already been shown by

* 'American Journ.,' 1861, January, p. 55.

Dr. Richardson, namely, that ammonia was found in the blood.*

The experiments of Petroffa,† however, show that the quantity of carbonate of ammonia increases gradually after the extirpation of the kidneys according to the time elapsed. This, however, cannot be considered as proof that urea decomposes into carbonate of ammonia in the blood-vessels, inasmuch as it only shows that the kidneys carry off ammonia, as we well know they do under the form of urate of ammonia, which would otherwise accumulate in the blood.

Hence, in the present state of our knowledge, I hold that it would not be incorrect to say that it is not probable, when death takes place after ablation of the kidneys, that it is not in consequence of decomposition of urea into carbonate of ammonia.

It is not here disputed that carbonate of ammonia, when injected into the veins, produces convulsions; but unless a great excess of it in the blood could be proved, clearly it would not be the agent in producing the symptoms of uræmic poisoning.

Those writers upon the subject who have, without any experiments of their own, assented to Frerich's theory, must not, of course, be taken as evidence of any value in support of the theory; yet these writers, from the deserved reputation, have done much to give establishment to it, as the names of Professors Braun, Stokvis, Feldmann, &c., testify.

The larger number of writers on the subject of puerperal convulsions, however, have apparently assumed that albuminous urine is a proof of the existence of uræmia. Whether it be so or not is a most important question, as albumen forms, in fact, our only ready means of diagnosis in practice.

* Lehmann has doubts as to the existence of ammonia in fresh healthy blood. He has detected it in acute diseases. He says, also, that urea in health is present in so small a quantity, that it is only recently that he had been able to convince himself of its presence.

† Virchow, 'Archiv,' xxv, p. 91, 1862.

There has also been a tendency with many, amongst Continental writers particularly, to mix up all these cases with pre-existent Bright's disease; for as albuminous urine is the most marked symptom of that complaint, so it has too readily with some—in past time, perhaps, rather than at present—been considered synonymous with that complaint.

That puerperal convulsion is very frequently associated with two of the most marked symptoms albumen and anasarca is well recognised; but that in a certain proportion of cases neither chronic Bright's disease nor any organic affections of the kidney has previously existed, the cases I bring forward will prove, though the exact proportion of these has yet to be made out.

No doubt, a condition of the system very similar, probably identical with Bright's disease, exists in pregnant women with anasarca and albuminous urine, &c.; that is to say, intimately associated with pregnancy, commencing only after pregnancy has begun, and passing off when it is ended; to again be lit up during each successive pregnancy, till a more or less permanent state of the disease is established: and thus pregnancy may be said to be one of the causes of Bright's disease. With this state eclampsia may be associated.

Upon true pre-existent Bright's disease, of course, pregnancy may supervene; and then also we may have eclampsia associated, not infrequently, but by no means universally. Most probably with these we have uræmia, because the kidneys have been affected for a sufficient time to have allowed the accumulation of urea in the system, enough to produce some, at least, of its effects. But in this class we are more likely to have more coma than usual with the convulsions; and it may be frequently remarked that the disease of the kidneys, which was in a quiescent state before, now becomes lit up, as it were, afresh, and that its secondary effects become severe or fatal. However, in both these cases, before the convulsions there is clear evidence of anasarca and albuminous urine.

At first the frequent presence of albumen in the urine of

patients suffering from eclampsia led to the belief that it was constantly present, and that the convulsions were owing to the uræmia so commonly held to be associated with it. But I shall bring forward cases to show that up to the time of the first convulsion, and even after for a short time, the urine is perfectly free from albumen, and that there was no evidence of anasarca beforehand; but that serious kidney symptoms shortly after begin to arise, as shown by the condition of the urine.

The cases I allude to progress in this order:

A woman approaching the full period of pregnancy, apparently in perfect health, without œdema, without albumen in the urine, is suddenly seized with an epileptiform attack. After a certain time has elapsed, albumen is noticed in the urine, at first in small quantities, shortly in profusion; then blood-globules, waxy and epithelium casts, are found in it. At this time the urine becomes scanty, of high specific gravity, with very high-coloured crystals of lithic acid in considerable quantity. The case, which is now one of acute desquamative nephritis, may terminate by gradual recovery, the albumen slowly disappearing; or death may ensue from the violent effects of the original attack, or from the retention of urea, &c., in the system, in consequence of the acute mischief in the kidneys.

Now, if these cases can be shown to occur, and if albumen in the urine be an indication of uræmia, and if those experiments above quoted be right—viz., that twenty-four hours at least, after the kidneys have ceased to act, must elapse before symptoms of uræmic poisoning can occur—then it follows that the convulsions cannot be owing to uræmia, at least the result of kidney-disease.

If this point be granted—and it seems that, so far as our present knowledge extends, it must be—then the only modes of explaining the occurrence of the acute nephritis are in one of these three ways: either—

1st. That the convulsions themselves are the cause of the nephritis;

2ndly. That the nephritis and the convulsions are produced

by the same cause, *e. g.* some detrimental ingredient circulating in the blood, irritating both cerebro-spinal system and other organs at same time;

3rdly. That the highly congested state of the venous system as is produced by the spasm of the glottis in eclampsia is able to produce the kidney complication.

This seems to me to be the state of the case as it at present stands, and further than this our present knowledge will scarcely allow us to proceed—that is to say, so as at once to decide; and it is for this reason that I have considered it better to call the attention of this Society, in order that, by the co-operation of some of its members, we may the earlier obtain sufficient data by which we may hope to clear up the question, than to wait till I had single-handed collected a larger number of cases—a work of more difficulty to those engaged in consulting practice than to those who are likely to see the cases at their outset.

Now in order to decide on the first point, namely, whether the convulsions themselves produce the kidney complication, we ought to inquire how far the non-renal convulsions can produce it. I have seen it stated that it is by no means rare to find albumen in the urine after an ordinary epileptic convulsion. In confirmation of this it is difficult to find sufficient evidence in English authors, though it would be an easy matter in those who have charge of epileptics. In those cases which have come under my own observation there has been no albumen following the attack. It is very desirable, indeed, that researches were made in this direction. *A priori* it does not seem difficult to believe that irritation to the cerebro-spinal system should cause it, since we know that injuries to the spinal column do produce marked changes in the urine; though how far nephritis may result one can hardly say. At any rate, it is a point which one would think would not be difficult to clear up.

With regard to the second explanation, there are some facts which may seem to give weight to it, namely, the cerebral symptoms which, in some cases, precede the attack a few days. But it is true we cannot detect the occurrence

of any abnormal symptom up to the moment of the convulsion in a large proportion of cases of puerperal convulsions: I mean even in those cases where we find copious albumen after, with acute desquamative nephritis. Yet these cases, it must be borne in mind, are by no means uncommon; they probably form half, and these are important in their bearing upon the whole question, because it is by no means improbable but that they belong to the class of those in which no albumen is found at first, but is after the convulsion. At least, we must not at present class them with those in which albumen has been detected before the convulsion. At any rate, in them we have, from *apparently perfect health*, convulsions and acute nephritis, which soon subside in the favorable cases. If these cases are not closely watched by the microscope, and for many days, the acute condition of the kidney-attack may be overlooked. And in many of these, which have run on to almost complete suppression of urine, with blood-discs, &c., although albumen was indeed present at the commencement, yet it was in a very small quantity compared with that which followed; and it must be recollected that the urine which was examined was passed after the convulsions. Therefore, is it not a fair question to ask, If the urine could have been examined before the attack, would it not have been free from albumen?

It is certain that the explanation given by some, namely, that the anæmic condition of the brain is the cause of puerperal convulsion, will not hold good in these cases; because there is no anæmia, neither simple, nor in connection with Bright's disease, of old or recent standing.

The occurrence of albumen in the urine in pregnancy has been by some confidently explained by the pressure of the uterus on the renal veins, whereby congestion of the kidneys ensues, and, as a consequence, an oozing of serum into the tubes, with a detention in the blood of the ingredients they should excrete.

It has been asserted by a German author, that as many as twenty-five per cent. of pregnant women have albumen in

the urine. This statement has frequently been repeated in England.

But is this really the case? One would think that such a question could be most readily answered; but I have not been able to find more than fifty cases on record, and those are given by Dr. Lever:* in *none* was albumen present. To these I can add another fifty cases investigated by the gentlemen attending Guy's Hospital Maternity: in *only one* was albumen present, and in this there was a clear history of old disease of kidney. Thus we have one hundred cases taken at random, and in only one do we find albumen in the urine. This, at least, must make us hesitate to believe that uterine pressure alone does cause albumen in the urine during pregnancy. But there are other considerations which must make us doubt the value of this explanation. The first is, that albumen is found at a stage of pregnancy so early that the uterus has not yet reached the renal veins so as to compress them. Again, if pressure were the cause, we should expect to find albumen in urine in cases of advanced ovarian enlargement. But I am not able to find any confirmation of this; and, as far as the cases which have been treated in Guy's Hospital can be taken as a test, there is no evidence in favour of the pressure theory. And here again it might be pointed out how easily most of these facts may be satisfactorily ascertained by the joint labour of many of the Fellows of the Obstetric Society, whereby a large number of cases might be examined.

In the above remarks I have not alluded to those cases of puerperal eclampsia where *no* albumen has been found during their whole course, because they are exceedingly rare. Cases are on record, and doubtless are to be now and then met with. But unless the urine has been frequently examined for twenty-four hours, we cannot be certain there is none: some of the cases might easily be overlooked, so slight is the quantity and so short its persistence. It is therefore necessary to examine three or four times

* 'Guy's Reports,' loc. cit., supra.

during the first twenty-four hours after the first convulsion.

It may be here remarked, that those cases where the albumen is slight are generally of the milder type, and much mixed up with hysteria, so that they are classed under the head of "Hysterical Eclampsia." But in nearly every case where the eclampsia is at all distinctly marked, we almost invariably find albumen, and even the more marked characters of acute renal disease. It is probably only because the insensibility not being so severe, the emotional system is not completely subjugated by it; nor is it under the proper regulating power of the mind.

Before concluding these remarks, I may again be allowed to urge the importance of examining the urine as early as possible; and, if obtainable, the urine passed before the first convulsion should be obtained: after this it should be tested twice a day, to ascertain the progress of the complaint. It is not easy in practice to secure the urine at so early a period. It may be mixed with that of other persons; but here the difficulty would not be very great, because if the mixed urine had no albumen, neither patient nor the other was affected; and if albumen were found in it, then it would not be difficult to obtain that of the non-pregnant person.

I have subjoined four cases in which the urine when first obtained had no albumen, but which afterwards had a large amount. This number may appear small, but it formed half of all the cases where the quality of the urine was capable of being ascertained early; and it is to be remarked that in those where albumen was found, from the first there was also anasarca. I therefore confidently expect that, if care is taken to ascertain the state of the urine beforehand, we shall find a still larger proportion of cases which are free from albumen up to the first moment of the attack; because, as before noticed, probably many of those cases which give albumen, but which have not been examined until after the fits have fairly set in, will be found free at the very beginning, for the urine bears all the characters of that of acute desquamative nephritis.

I need scarcely remark, that observers should be very careful not to allow blood to be introduced into the urine in conducting these inquiries.

CASE 1.—Mrs. C—, about twenty-five years old, primipara, was taken with eclampsia at the seventh month of pregnancy. The attacks were repeated nearly every half-hour, and were of a very severe, strangling character. The liquor amnii was drawn off, and delivery soon took place. The attack abated soon after, and then entirely ceased; much stupor continued, but this went off. About the sixth day after, she was taken with pneumonic symptoms (secondary ?), and died the tenth day.

The urine which was passed just before the attack was entirely free from albumen or other abnormal state. Twelve hours after, it was highly charged with it, with waxy and epithelial casts, of high colour and specific gravity. Next day the urine, which was drawn off, became less in quantity, of higher colour, much albumen, blood-corpuscles, and copious mixture of albumen, with uric-acid crystals. This state continued for six or eight days, the albumen gradually disappearing before she died.

There was no symptom of anasarca previous to the first attack; but she had had some unpleasant sensations in the head for a day or two before, with partial loss of sight, noises in ears, &c.

CASE 2.—Mrs. C—, 1865, was attacked at the early part of her first labour with puerperal eclampsia; this was repeated with great frequency, and delivery was ultimately accomplished by craniotomy. The attacks after a time gradually subsided, and the next day she became sensible. The urine was drawn off by the catheter during the early part of the case. It was examined, but not a trace of albumen existed. The urine required to be drawn off again next day, and for three or four days. On the first occasion after delivery, and upon each subsequent occasion, albumen was found in large quantity. When it was tested after the cessation of the

lochia, there was no albumen: it was not examined by the microscope. I am indebted for these facts to the observation of Mr. Burton, of Lee, with whom I had seen the case after delivery. This patient had beforehand no symptom of œdema, nor other ailments.

Case 3.—Mrs. —, 1860—primipara—was delivered by the forceps for slight contraction of the pelvis. While the instruments were being applied, she had an epileptiform fit, which was twice repeated after labour. The urine drawn off immediately after the first attack had so small a trace of albumen, that it was doubtful whether it possessed it at all. Nine hours after, its presence was strongly marked. Twenty-eight hours after the first attack, no trace of albumen was detectable. She recovered quickly. She was free from any abnormal symptom before the confinement.

Case 4.—A. B—, 1866, a well-formed girl for her age, fourteen and a half years, being in labour at full term, was taken with puerperal convulsions of great severity when the head was near the outlet. Forceps were applied, and she was easily delivered. The urine was drawn off after the placenta was expelled: it was examined; no albumen existed. The fits recurred with excessive frequency, with deep coma between; pulse 130 per minute, very weak. This continued notwithstanding treatment, and she gradually became worse, dying thirty-six hours after labour.

The urine was drawn off a second time, twelve hours after the first, and then a copious quantity of albumen was very apparent. I am indebted to Mr. White, of Tooley Street, for the notes of this case, which I treated with him.

Dr. Graily Hewitt agreed with Dr. Hicks in his statement that much had yet to be learnt respecting the nature of the connection between the albuminuria and the convulsions in these cases. He thought it extremely probable that in some instances the albumen appeared in the urine as the result of the convulsions. Facts would have to be collected to prove this. He mentioned an interesting case where the convulsions appeared after the labour

was over, and ended fatally before forty-eight hours had elapsed. Here the kidneys were very extensively diseased, yet no symptoms indicating it had been noticed previous to the labour. The presence or absence of organic disease of the kidneys in these cases is the point which it is difficult to determine in all instances.

Mr. Benson Baker was much interested by the valuable and highly suggestive paper just read. He related a case that had been attended by a midwife. The woman was confined on the Wednesday evening, and everything went on well till 9 a.m. on the Friday morning following, when, after sitting up in bed for a few minutes, she was seized with convulsions; these lasted for an hour and a half, when she died comatose. The autopsy, made forty-eight hours after death, showed that the uterus had not contracted; the uterine sinues were patent, and small clots were adherent to the walls of the uterus. The other abdominal organs were healthy. The kidneys bore unmistakable evidence of Bright's disease. The left side of the heart was empty, the right side full, and the pulmonary artery plugged up with a travelled clot. No doubt the woman died from venous embolism. But what relation did the kidney disease, with albuminuria and the fibrinous condition of the blood, bear to the convulsions?

Dr. Barnes observed that the author had chiefly directed attention to the pathology of the disorder, and especially to one point, viz., the relation of albumen in the urine to the convulsions. Was it true that the convulsion was the cause of the appearance of albumen in the urine? If so, then we must seek further for the cause of the convulsion. Now, he thought he had evidence that, in some cases at least, the albumen in the urine was an antecedent of convulsions. Had Dr. Hicks made any analyses of the blood in puerperal eclampsia? Such analyses were very rare, and were wanted. Dr. George Harley had published a case. He (Dr. Barnes) had published another ('Lancet, 1865; "Lectures on Puerperal Fever"). In this case the serum of blood drawn during the attack was found by Dr. Bernays to contain urea and crystals of uric acid. Certainly, then, urea existed in the blood in substance, and not necessarily as carbonate of ammonia. Now, he did not contend that therefore the urea and uric acid were the poisonous elements that excited the convulsion; but, as indicating that the kidneys were overpowered, unable to throw off the excrementitious matters forming in the system, the urea and uric acid in the blood might be the exponents of other excrementitious matters not cognisable to the chemist, which acted as poisonous irritants to the nervous centres. He had therefore described this condition under the name of uræmic excretory puerperal fever. It appeared that the kidney must be more or less suddenly overpowered; that, its secretory functions being rapidly suppressed, it

became congested. An analogous state arose in the acute albuminuria of scarlatina, or as when a sailor heated with work fell overboard. In such cases there was sudden strain upon the kidneys. This often happened in pregnancy. Dr. Lever held to the last that pressure was the cause. But this could not account for many cases. He had seen cases of albuminuria and convulsions as early as the fourth month, which, after bleeding, were cured; the albumen disappearing, the fits ceasing, and pregnancy going on to term. He had made many analyses of urine in pregnant women, and could confirm the statement that albumen was not a natural or common ingredient in the urine. As to the specific gravity of the urine in albuminuria with convulsions, his impression was that it was usually below the standard; certainly the urea, although never absent, was much diminished in proportion. That albumen in the urine was at least sometimes an antecedent condition to eclampsia he had evidence to prove. He had known cases of persistent kidney affection with albuminuria, in which successive pregnancies were marked by convulsions. And there were in many cases preliminary nervous symptoms, as headache, blindness, deafness, loss of memory, remarked some days before the fit, indicating clearly the action of some poison in the blood; and when the affection was at all chronic the blood was so affected that hæmorrhages took place into the retina. One such case had been published by Dr. Robert Lee. Another had been observed by himself. A lady came to him from Wales, when about six months pregnant, complaining of impairment of sight. There were albumen and casts in the urine. He sent her to Mr. Wordsworth, who examined by the ophthalmoscope. He saw clearly hæmorrhagic effusions in the retina.

Dr. Hicks, in replying to the various speakers, said that he had particularly inquired whether scarlatina had been present before the attack, and whether œdema had been present in these cases. In these instances there was no evidence of any disease at all, and therefore he thought it would be begging the question to assume that there was latent kidney disease before. In any case it was not the sudden appearance of albumen which he had noticed, but the sudden appearance of acute desquamative nephritis. How that will be explained, whether according to Dr. Barnes's view or any other cause, he thought it highly desirable to obtain more facts before we attempted to theorise.

DECEMBER 5TH, 1866.

DR. R. BARNES, President, in the Chair.

Present—66 Fellows and 16 visitors.

The following gentlemen were admitted Fellows of the Society:—Dr. Henry John Bransom, Dr. William Thomas Molloy, and Arthur Browne Steele, Esq.

The following gentlemen were elected Fellows of the Society:—Dr. Thomas Brown, Kennington Park Road; Dr. Charles Lovegrove, Sevenoaks; W. J. Pilcher, Esq., Boston, Lincolnshire; Dr. V. Saboia, Rio de Janeiro; and W. Henry Vipan, Esq., Uxbridge.

Dr. Edward Head and Mr. G. Gaskoin were appointed Auditors of the Society's accounts for the year 1866.

Dr. Greenhalgh showed a modification of his Metrotome, and also a new Intra-uterine Stem.

CASE OF DOUBLE PLACENTA

OCCURRING IN THE PRACTICE OF J. C. RICHARDSON, ESQ., BATTERSEA.

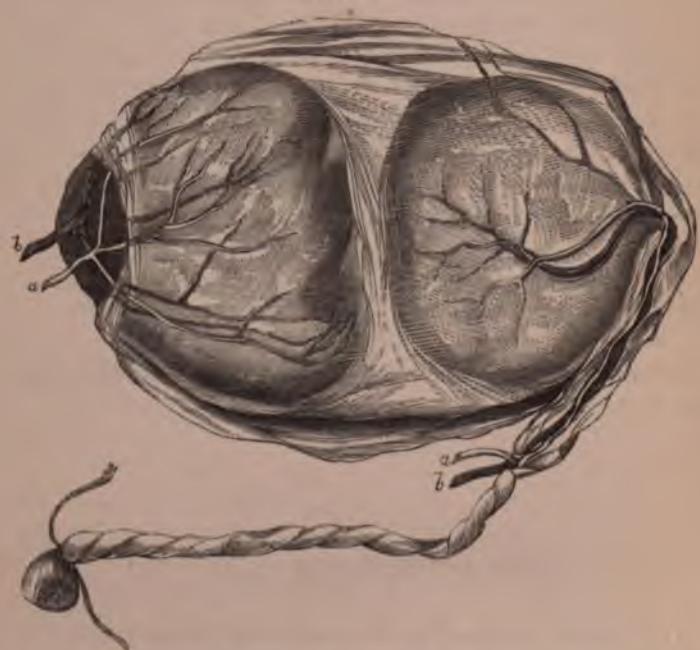
(Communicated, with Remarks, by Dr. GRAILY HEWITT.)

THE following is an important contribution to the history of abnormalities of the placenta. The uterus contained one fœtus; that fœtus was provided with one umbilical cord. The cord divided at its junction with the membranes

into two branches, each of which ran to a separate and distinct placenta.

The following is the history of the case:—Mrs. T— was attended by Mr. Richardson in her eighth labour at 3 a.m. on November 15th, 1866. The labour was natural. About fifteen minutes afterwards hæmorrhage set in. Brandy and ergot were given, and after a very slight traction the secundines came away.

Fig. 23.



During the first part of this last pregnancy she had almost constant bleeding from the uterus up to the fourth month, and the quantity of blood lost was considerable.

The placenta consists of two perfectly distinct and separate parts (Fig. 23). Each placenta is of a rounded form, having an otherwise natural appearance, and of medium thickness. The one measures $4\frac{1}{2}$ inches in diameter; the other $5\frac{1}{2}$

inches in diameter. The membranes are nearly complete. The umbilical cord is single, contains three vessels as usual. The cord joins the membranes at one edge of one placenta, the smaller one of the two; and it sends two vessels to this structure, an artery and a vein, *a*, *b*. From this point the cord sends off two other vessels which traverse the membranes for a distance of 6 inches, and then join the larger of the placentæ at its edge. In removing the secundines, the two vessels passing from the cord to the smaller placenta have been torn across, but the torn extremities are readily recognised. The two placentæ are distant from each other for a space of from 2 inches to $2\frac{1}{2}$ inches. The intermediate space is occupied by a portion of the membranes which is rather thicker and denser than common, but which is transparent and without a trace of vascular apparatus passing from one placenta to the other. The edge of one of the placentæ was evidently the seat of the hæmorrhage said to have occurred after the birth of the child, there being here a space half the size of the palm of the hand where clots are still adherent.

I regard this specimen as one of great interest and importance, not only physiologically, but from a medico-legal point of view. The complete separation of the two placentæ, the apparent completeness of each, would certainly lead any one inspecting either of them to believe that the whole placenta had come away. It is evident that if one of the placentæ in this case had been expelled, the practitioner in attendance might naturally have concluded that the whole placental mass had been thrown off. A careful examination of the attachment of the cord only would have suggested the idea of there being something still *in utero*. The case shows the importance of examining the membranes as well as the placenta when the latter has been removed, and especially in cases where any force has been employed in effecting the separation of the same.

The occurrence of double placenta is of great rarity. In the present instance both the placentæ are of the battledore shape, the vessels entering at the margin.

In Vol. VII* of the Society's 'Transactions,' my esteemed friend Dr. Uvedale West has described some interesting abnormalities of the placenta, in one of which the vessels ran a short distance in the membranes before joining the placental mass. In the present case the same peculiarity is observable, with the additional and still more important abnormal condition, the existence of two separate placentæ.

A REMARKABLE CASE OF PLACENTA PRÆVIA

By George Roper,
SURGEON TO THE ROYAL MATERNITY CHARITY.

Mrs. A—, æt. 27, in her fourth pregnancy, at full term, was taken in labor on the 10th of November, 1866. She is a woman of small stature. Her previous labors had been severe, in consequence of her pelvis being somewhat small.

Between her second and third confinements, the last of which happened three years since, she had inflammation of the uterus while in an early stage of pregnancy; at the same time she had a swelling on the posterior surface of the uterus, which Dr. Hicks, who saw her in consultation with me, thought was a hæmatocele. She aborted while the uterus was inflamed, and endured much severe pain; but since this time she has had no uterine affection, and her general health has been good. I was called to see her at 11 a.m. on the 10th of November. She had had slight pains for six hours, and the liquor amnii had been discharged half an hour before I arrived. I found the os uteri open to about the size of a half crown; its position was so high that it was with difficulty reached. The edge of the placenta, smooth, thick, and detached, could be felt protruding posteriorly into the vagina to the extent of two inches. The head could be felt high up above the placenta, and was lodging on the pubis; it could be felt externally in the right groin. The length of the vagina, the high position of the os uteri, and the difficulty in reaching the head, at first produced an im-

* Vol. VII, p. 257, "On an Abnormal Variety of the Battledore Placenta."

pression that the presentation was a transverse one. There was no hæmorrhage. The pains occurred only at long intervals, and were very feeble. The small size and unyielding state of the os uteri, and the rigidity of the soft parts generally, contra-indicated fitness for delivery; indeed, there was no symptom calling for interference, so I left her, with instructions to the nurse to be watchful against flooding. I saw her again after seven hours (at 6 p.m.); there was no alteration, excepting a slightly increased dilatation of the os uteri; the placenta and head were much in the same positions. I saw her again in another six hours (at 12 p.m.); there was no alteration, and the labor being slow and feeble, I advised her to go to bed as usual; this she did, and slept for two hours. As I received no message, I did not visit her for twelve hours (at 6 p.m. on the 11th). The os uteri at this time was about the size of the brim of a small teacup; it was high up, and the placenta stretched quite across the open os; above it the head could be felt to occupy a position more towards the centre of the pelvic brim; the scalp was much swollen, and the occiput pressed into a wedge-like form. There were no indications requiring immediate interference, and as the pains were more frequent and forcible, I determined to leave the case to the natural efforts.

In four hours (at 10 p.m.) I received a message to see her, and found her in active labor; this had been going on for two hours; the pains were very frequent and forcibly expulsive. The head was still above the brim and impacted, in consequence of the bulk of the placenta being nipped between the promontory of the sacrum and the head; it also filled up the hollows on each side of the promontory. The pelvic brim was thus greatly diminished, both in its antero-posterior and oblique diameters. The whole of the placenta below the promontory was detached. The hand was introduced into the uterus, with a view of drawing down the placenta and extracting it; but it was too tightly held between the head and the posterior margin of the brim. The next plan was to push it up above the brim; this was done by applying the ends of the fingers. There was some diffi-

culty in doing this, in consequence of the tightness of the impaction and the expulsive action of the uterus. Within half an hour after having passed up the placenta, the child was born by natural effort. There was feeble pulsation of the heart at the moment of birth, which soon ceased. The swelling of the scalp and occipital elongation of the head was very great. The entire time of labor was forty-two hours. Throughout there had been no hæmorrhage; she said she had a "show" at the commencement of labor, and on being closely questioned on this point, she said one small clot, the size of two fingers, had passed; this was the only approach to hæmorrhage; there was no gushing or draining of blood. The placenta came away easily; it was peculiar in form—somewhat heart-shaped. The pointed portion, which had covered the os uteri, bore on its maternal surface a well-marked ecchymosed line, caused by pressure of the posterior margin of the os uteri. This line indicates the extent of placenta which had been exposed over the open os uteri, and the substance of this part of the placenta is much thickened by pressure. The corresponding fœtal surface shows a hollow caused by the fœtal head.

The patient recovered without a bad symptom.

There are many circumstances of interest in this case; but as this paper is intended only as a report, I will merely enumerate them. They are—

a. The absence of hæmorrhage.

b. The influence of cervical position of the placenta in causing lingering labor.

c. The same influence causing deflexion of the fœtal head (a source of the frequency of transverse presentation in connection with placenta prævia).

d. Arrest and impaction of the head at the pelvic brim by means of the placenta.

The first three of these conditions have been elucidated by Dr. Barnes in his work on placenta prævia; but I am not acqauinted with any recorded case in which the placenta was an obstructing medium at the brim.

CASE OF CÆSAREAN SECTION.—RECOVERY OF MOTHER.—CHILD NOT VIABLE.

By Wm. Newman, M.D., Stamford.

Ellen O——, æt. 27, wife of a labourer residing at Cottesmore, Rutland.

Married eight years. Has had five pregnancies ending in one miscarriage, and four children all born at full time. Was very unwell with threatening peritonitis after the third confinement. No such result followed the last confinement.

She is now pregnant for the sixth time. Last menstruation January 9—13, 1866.

Has had symptoms of discomfort about the lower part of the abdomen for the past seven or eight months with heaviness and dull pain. Some quantity of watery discharge from the vagina, which has been at times offensive.

1866. July 19th. Thursday.—Pain commenced and continued regular in recurrence until

21st. Saturday, 3 p.m., the liquor amnii was discharged. 7 p.m., Dr. Ashforth, of Market Overton, was sent for, and recognised an abnormal condition of the os and cervix uteri.

To Dr. Ashforth I am much indebted for the opportunity afforded me of seeing the case; and still more for his constant care, and for his kindness in keeping a constant record.

To his attention the successful ending is undoubtedly due.

22nd. Sunday.—Dr. Ashforth sent over to me, giving outline of the case. I arrived at Cottesmore 3 p.m. The following notes were made:

The patient is a strong-looking florid woman, dark hair, tall, rather thin. Respiration normal. Pulse 96, full and sharp, increasing to 110, at least, when the uterine contractions recur. Is anxious-looking, and gives one the impression that continuous pain has told upon her. No sleep worth mention for last two nights, takes food, and has not been specially sick. The pains recur about every eight or

ten minutes, and influence the uterus distinctly, for as felt through the abdominal parietes it becomes hard and firm.

External examination.—The abdomen is occupied by a central tumour, extending up to about an inch below the umbilicus, firm and solid, influenced by pains as they recur; abdomen hardly so large as is usual at six months, pelvic alæ prominent. The areola of the breast is dark and wide, strongly marked, there is also the central line shading of the linea alba. The fœtal heart can be distinctly heard, mostly to the left side, and about one inch from central line, but more or less over nearly the whole of the uterine tumour. The placental souffle cannot be accurately made out.

Examination per vaginam.—A large, lax, well-dilated, and well-lubricated vagina, and is distinctly pushed downwards as each pain or uterine contraction occurs. Projecting into this canal, and directed somewhat backwards, the os uteri can be felt. The os is an unusually small aperture, and will not admit the tip of the forefinger more than a very short distance.

The normal tissue of the cervix, as ascertained by touch, is replaced by a very unusual hardness, circular, uniform, and infiltrated apparently into body of uterus in every direction, for more than an inch in extent; beyond this distance the uterine tissue feels normal, is influenced by the uterine contractions, and through the normal tissue resistance resembling the child's head can be felt. The cervix is eaten away at its posterior lip into a deep sulcus, into and around which the finger passes readily; the anterior lip is as hard as the posterior, irregular, with a hard nodulated or granulated feeling to finger, but not exhibiting to the touch any very distinct hollow or tissue-destruction. The os has a well-marked edge anteriorly merging into the sulcus behind, but yet has there an edge which stands up to finger, and in great measure bounds the sulcus; feels to finger as if it were an opening cut out of a piece of cartilage, perfectly hard and resisting, and beyond some half inch in depth, the tip of my forefinger cannot be made to penetrate.

A silver catheter, and then a very large gum-elastic

catheter could be slipped through the deeper and more closely narrowed part of the os; some liquor amnii escaped on this being done.

At last, to make myself quite sure as to the appearances, I introduced a large size (Fergusson's) speculum, and could readily bring into full view the deep sulcus, the small narrow orifice and the thickened anterior lip, throughout denuded of epithelium, granulated, and furnishing watery oozing and sanious fluid, leaving no question in my mind that we had to deal with extensive epithelioma of the cervix and lower part of the body of the uterus.

Finally, I passed my whole left hand, well greased, into the vagina, but with no force that was justifiable could I make the slightest advance in pushing my finger-tip through the os uteri.

It appeared to Dr. Ashforth and myself that the only course open to us, which would allow of the poor woman having a chance for her life, was to perform the Cæsarean section.

Incisions per vaginam through the semi-cartilaginous cervix might be made, but with little certainty as to the extraction of the child without extensive laceration, and possibly serious hæmorrhage.

The patient and her friends were duly told of the serious character of the case, and yet gave ready consent to whatever we deemed best.

Mr. Heward, of Stamford, joined us afterwards, made an examination of the parts implicated, and concurred with us in the opinion that the abdominal section was fully justified.

23rd.—The operation was commenced a few minutes after midnight.

Catheter first introduced, and enema given; pulse fully 110. The patient was drawn down on bed so that her feet rested on cushions placed on floor. Her eyes were bandaged. Richardson's jets were used, and two froze most fully the line of incision from one inch below the umbilicus to a little above the os pubis in central line. The incision, from four to five inches long, was made without pain; the peritoneum

divided on a director, and the uterus at once came in view; very little bleeding. I cut into this about three inches long, on anterior aspect, and in midline, allowing jet of liquor amnii to escape, which was collected by sponge. Then I introduced my finger into uterus, lengthening the incision on it as on a director. At this moment the breech of the child was pushed by uterine action well into sight, and between lips of wound, and laying down knife I had only to tear through membranes and seize the breech. Extraction was readily accomplished by sweeping the arms over the head, which came last. The child lay in ordinary obstetric position, head downwards, well into brim of pelvis; was alive when extracted, and made some attempts to breathe: a well formed male child, from six and a half to seven months of uterine life. The placenta was attached to the posterior and superior part of the uterus, was peeled off very readily, and with its membranes thoroughly removed.

The uterus contracted on my hand, and then the intestines came forward into view at the upper part of the wound. These Dr. Ashforth retained by lateral pressure on the abdominal walls. The uterus still furnished blood, which welled up in no large quantity from beneath, and was readily removed by the sponge. I retained my fingers on the uterus, grasping it somewhat, and drawing the cut edges together, as they did not seem at first to come into perfect apposition, the peritoneal edge remaining somewhat everted. Then, as my fingers were cramped, Mr. Heward took my place, and I passed an elastic catheter from below through the os uteri, allowing a little blood so to run away per vaginam.

The actual operation lasted for comparatively few minutes, but not for an hour nearly did we close the external wound. The hæmorrhage was not great, probably not more than four ounces of blood lost in whole, and the uterus contracted at last very thoroughly, aided by jets of ether directed on the abdominal wall.

I introduced three harelip pins, embracing the peritoneum with the whole thickness of the abdominal wall, and over

these the usual twisted suture. Between the needles a superficial suture of silver wire was passed, and some long strapping completed the local dressing. The lower angle of the wound was left slightly open, and dressed with wet lint.

The patient bore the operation very well. When all was finished the pulse was only 84.

The after treatment was managed thus:—Small but frequent doses of opium; frequent introduction of catheter; frequent small quantities of food, milk, beef tea, &c.

In the first forty-eight hours all went well: no sickness, no shivering.

On the third day violent sickness began, lasting more or less for three days. Nutritive enemata were employed, and hardly anything given by mouth.

Excessive distension of the abdomen from flatus was noted on the eighth and ninth days; and local Faradization of the abdomen, passing currents also from mouth to rectum, was found to be of the most marked benefit.

Her progress to recovery was slow, but steady.

Menstruation occurred for the first time on September 3—7 (forty-two days after the operation), and again on October 2—6.

October 22.—I saw her and made the following note:—Looks well and is gaining strength rapidly. Abdominal cicatrix (four inches long) is firm and sound. A mere line above, wider at lowest point.

Vaginal examination.—The uterus is larger and more heavy than natural, but quite movable. Cervix very hard, but pendent and tapering; hard tissue can be felt to extend from it into the texture of the uterus. It is in normal position.

As seen through the speculum the os uteri is a very small puckered opening ($\frac{1}{4}$ in. by $\frac{1}{8}$ in.), the anterior lip is fairly sound; posterior lip in great part eaten away. Both os and cervix exhibit a granular appearance, and are denuded of normal epithelial covering.

ON THE ANATOMICAL RELATIONS BETWEEN THE MOTHER AND FŒTUS.

By Henry M. Madge, M.D.

For a very considerable time, and for reasons which I am about to explain, I have entertained views and opinions on this subject, opposed to those generally received; opposed, as far as I can learn, to the teachings of our medical schools and to the requirements of the examining boards. I have therefore, after some hesitation, and after waiting for further opportunities of testing the correctness of my views, decided on bringing them as they are before this Society—the most suitable place, perhaps, for their full and fair consideration.

In a little work published in the early part of 1854, speaking of the nutrition of the fœtus in utero, I find myself saying, "The utero-placental vessels, of which so much has been said, and from which hæmorrhage takes place on the separation of the placenta, are the curling arteries and veins which pierce the decidua to reach the placental interlobular spaces, and also the vessels of the decidua itself, all of which belong to the maternal portion of the placenta." * Now, these few words, I believe, contain the whole gist of what is called the Hunterian doctrine. I make the quotation here to show that if I held or inclined to any creed at all in the matter, it was probably in accordance with the doctrine contained in it. In October, 1854, I had the rare opportunity of examining the parts for myself, when, of course, I expected to find the utero-placental vessels I had myself been writing about. In a case of labour complicated with violent convulsions where I was called in to give assistance, the patient died undelivered. An unsuccessful attempt to save the child was made by means of the Cæsarean operation. I availed myself of the opportunity of removing the womb

* 'The Diseases of the Fœtus in Utero,' p. 190.

with the placenta attached, and made a series of careful injections and examinations, the details of which were published in the 'Lancet.' *

It happens very fortunately for our patients, however unfortunate it may be for science, that such an opportunity as I had of examining the utero-placental connections very rarely indeed presents itself. I therefore sought out other means of establishing my views. Assisted by an accomplished experimental physiologist, I made a great many injections and examinations of human placentæ, and experiments on the fœtuses of cats and dogs before their removal from the womb. I also availed myself of all the literature on the subject that I could obtain, and in about three years —that is, in 1859—I published the materials I had collected in a pamphlet. There are several copies, I believe, of this pamphlet in the Society's Library; so that all I need do here is to give the conclusions I was enabled to arrive at.

Conclusions.—1st. The utero-placental arteries and veins are too small, both in size and number, to serve the purpose of conveying blood to and from the placenta for the purposes of fœtal nourishment, or to be more than a very trifling source of hæmorrhage on their rupture at child-birth. From the analogies afforded by comparative anatomy, and from observed facts, they appear to be nothing more than vessels of nutrition to the parts in which they are found.

2nd. The supply of new materials to the fœtal blood takes place by endosmosis through the utero-placental decidua, and also by a further "endosmotic process," through the membrane covering the extremities of the umbilical vessels. (The latter opinion has long been partially recognised by several authors.)

3rd. The separation of the placenta from the uterus, so long as the uterine decidua remains perfect, does not cause hæmorrhage in an obstetrical sense.

4th. Hæmorrhage at child-birth, such as comes under the observation of the accoucheur, takes place principally from the uterine sinuses during and after the separation of

* February, 1856.

the placenta, and is caused by the giving way in various places of the uterine decidua.

5th. As the uterine sinuses are neither venous nor arterial, but communicate with both arteries and veins, (the nature of this communication is yet a subject for investigation,) and form a receptacle for effete portions of fœtal blood, the nature of the blood issuing from them at child-birth must vary according to circumstances.

6th. The placenta is one of the common though limited sources of hæmorrhage at ordinary labours; but in some cases hæmorrhage may take place from it to a considerable extent. Hæmorrhage may also take place from ruptured vessels in any part of the placenta or cord.

7th. Hæmorrhage at child-birth may be a mixture of the maternal blood with the fœtal—materno-fœtal—or it may be arterial, or a mixture of venous with arterial.

8th. Although the generally received history of the development of the human placenta leads to the supposition of a "maternal portion" at the period we are treating of, the placenta can only be regarded as one, independent, easily detached mass. It therefore appears to be inconvenient to retain at this period the term "maternal portion," the only portion appearing to belong to the mother being otherwise called the "uterine decidua."

I have copied verbatim these conclusions arrived at in 1859, and all my subsequent reading and observations have only tended to prove to my own mind their general correctness. As my little work had to pass through the ordeal of being reviewed, I was anxious to see what would be said about it. Some of the reviews were very flattering indeed; others, on the contrary, were anything but flattering. The reviews, however, both favorable and unfavorable, were of a very superficial character, and on the whole I came to the conclusion that the reviewers knew very little more of the matter than other people. Shortly after these reviews appeared, the late Dr. Adams, of Banchory, in Scotland, one of the foremost literary men of modern times, evidenced more particularly by his labours for the Sydenham Society,

sent me his pamphlet, published in 1858, "On the Construction of the Placenta, and the Mode of Communication between the Mother and Fœtus in Utero." This pamphlet is the result of much literary labour, and is an historical sketch of the whole subject.

I will give very briefly a few gleanings from it. It appears that Galen was the first to make any attempt towards framing a definite doctrine on the subject. He propounded the theory that there is a direct communication between mother and child by means of blood-vessels. This, however, did not imply the kind of vascular connection advocated in modern times by the Hunters, but similar to that by which tumours and abnormal growths are connected to the body. The child, in fact, like a tumour, was supposed to be a part of the mother's system. For fourteen centuries this was the accepted doctrine, and the wonder now is that such a crude, erroneous notion prevailed so long. It was at length disturbed by Harvey, who, in his work "On Generation," investigated the subject most minutely, and decided that utero-placental blood-vessels do not exist. Harvey's views became the established doctrine, and remained so down to the time of the Hunters. John Hunter and Dr. William Hunter, separately but simultaneously, professed to have made the discovery that Harvey was wrong, and that utero-placental blood-vessels do exist. These vessels they have immortalised under the names of "curling arteries and veins—the size of crow-quills;" which designation has received a sort of parrot-like recognition and repetition by almost every author on the subject since their time. So important was this discovery supposed to be, that the brothers Hunter set up rival claims to it, which ultimately led to an estrangement; and it is said to be partly owing to this circumstance that we are indebted for two Hunterian Museums, one in London, and another in Glasgow.

Dr. Adams quotes the following observations made by Professor Meigs, of Philadelphia. They are also quoted by Dr. Read, whose work I shall have to speak of. Professor Meigs

says—"In a post-mortem made in the presence of Drs. Yardley and Wallace, I detached the whole of the placenta from the womb, after a careful injection made of the aorta by Dr. Wallace. Neither I nor those gentlemen, upon the most minute and careful search, aided by good lenses, could verify the existence of even a single vessel passing from the womb to the placenta." Professor Meigs relates two other examinations, and concludes by saying, "As I must confide in my own rather than in other men's senses, I find it impossible, under my own observations, to adopt the views of the Hunters, and I prefer the opinions of Seiler and of Velpeau." Dr. Adams concludes his pamphlet in these words: "It thus appears that historical research and the most recent observation lead to the same conclusion, namely, that the human placenta is altogether a fœtal structure, having no vascular connection with the mother."

It was evidently a great source of gratification to Dr. Adams that my independent observations and examinations led to the same conclusions that he had himself, after considerable research, arrived at. I had the pleasure and advantage of a long correspondence with him on this and kindred subjects. During the correspondence, his son, on a visit to London, called on me for the purpose of examining my preparations, and they were pronounced to be perfectly satisfactory and trustworthy. I feel some satisfaction in the circumstance that I am now fulfilling a promise made to my late friend that I would bring his labours under the notice of one of the London societies.

In 1861 a very important work on placenta prævia—one of the most important, perhaps, that has ever appeared, and now frequently referred to—was published at Philadelphia by Dr. Read. Towards the beginning of the work, an analysis is given of nearly all the theories that have hitherto been advanced on the utero-placental connections. Nearly the whole of my original paper in the 'Lancet'—all, indeed, that appeared as an abstract in 'Braithwaite's Retrospect'—is introduced, and, I think it is scarcely too much to say, contributes a leading share towards the anatomi-

cal and physiological grounds on which the work is founded. Dr. Read unreservedly adopts my views. It thus appears that my humble labours have been more appreciated abroad than at home, on the principle, I suppose, that "a prophet is without honour in his own country." Since my views have been put so prominently forward in this American work, they have attracted the attention of at least one professor at home. Dr. Murphy has noticed them in his 'Manual of Midwifery'—only, however, to oppose them. It is evident from what Dr. Murphy says, that he had not seen my pamphlet, and that he quoted from what he found in Dr. Read's work, which, after all, is only an abstract of an abstract. Among others who have noticed my pamphlet, a friend of mine, some time ago, made it the groundwork of a successful thesis for the medical degree at Cambridge. I cannot forbear mentioning that our first president, Dr. Rigby, took a deep interest in my inquiries, and frequently urged me on to further research. It is hardly necessary for me to mention that Dr. Rigby edited Dr. William Hunter's work on the Gravid Uterus.

In making the foregoing remarks and quotations, my object has been, after stating my own views, to show how far they have been noticed or adopted or corroborated by others. At first I was disposed to claim the honours of having made an important anatomical and physiological discovery; but, with more extended reading, I have found myself obliged to take the lower ground of endeavouring to prove by original and independent researches the truth of a very old and, to some extent, exploded theory. I think, however, it may be fairly said that whoever is fortunate enough to settle this vexed question—a question in which the most honoured and venerated names in medical science, Harvey and Hunter, are arrayed, as it were, against each other—may well be proud of the achievement.

What further, then, is to be said as to the present state of the inquiry, and in what direction should future researches be conducted in connection with it? I will first observe, that it is an unfortunate and

at the same time a common occurrence in the history of scientific investigations—and in none more so than that under discussion—that those who set out with a desire to prove or to disprove a certain dogma or theory nearly always succeed in doing so, at least to their own satisfaction; and thus it has happened that observers who have not desired to find utero-placental vessels have been unable to discover the smallest evidence of their existence, whilst others have been able to find them in large numbers—as large as crow-quills, and, according to certain injections, almost as large as the little finger. If these remarks are true as regards examinations carried on with the naked eye, they are still more applicable to microscopical investigations. Nearly all who have published their microscopical researches on this subject have professed to have found something new; and on each supposed new appearance, a new theory, generally of a most elaborate kind, has been founded. Reid, Goodsir, and Weber, among others, have contributed largely to this kind of literature. In perusing their writings, it is curious to observe that although they are all speaking about the same thing—the same parts—their descriptions and theories are quite distinct, and stand apart, uncorroborated by each other, or, as far as I know, by any other observer. Now, as all these ingenious theories, illustrated by equally ingenious diagrams which are most accurately reproduced in every new text-book, are based more or less on the Hunterian doctrine, it follows that if the latter is proved to be wrong, they also, to the delight of students—who, I fear, in many instances regard them as so many Chinese puzzles—must fall to the ground.

It appears to me that a comparatively simple matter has been made most difficult and complicated by investigators and authors themselves, and that there really now remains much more to unlearn than to learn.

With regard to the position given to either side of the question by eminent names; on one side, we have to range the names of the Hunters, Lawrence, Dr. Lee in 1842, Dr. John Reid, Goodsir, Weber, Mackenzie, Dalton, and

nearly all the teachers and professors of the present day. On the other side, there are Harvey, Monro, Velpeau, Seiler, Dr. Lee in 1832, Meigs, Robin, Adams, Read, and many others—a minority, it is true, but a highly respectable one. So much, then, as to the present state of the inquiry. As to further researches with the view of deciding the questions at issue, most valuable aid may yet be obtained from the use of the microscope. The truth—the secret I might call it—of the whole matter is embedded, as it were, in the utero-placental decidua. With this impression, a few years ago, when I had more time at my disposal than at present, I commenced making a series of microscopical preparations of the parts in question, with the intention of bringing a complete microscopical exposition of the subject before this Society. Obstacles, however, came in the way: the appearances varied so much with varying conditions, and the preparations after being mounted were so difficult to preserve unchanged, that I at length abandoned the design. It is very likely that, with the present improved methods of examining and mounting preparations, the obstacles I met with might be overcome; and I still hope at some future time to carry out my original design. My examinations, as far as they were carried, corresponded in their results very closely with those of Robin, of Paris. The intervening decidua is certainly not, as maintained by some observers, a mere gelatinous exudation, free from all organisation and structure. It is, doubtless, soft and gelatinous in appearance, and imperfectly organised, but sufficiently so for the purposes of a membrane. I strongly commend this part of the inquiry to those who have time and opportunities for carrying it out. Placentæ are numerous enough, and can easily be obtained. To get uniform results, the length of time after the removal of the placenta from the uterus—whether it has been kept dry, or in warm or cold water, or in spirit or Goadby's fluid, and the kind of instrument used, and the power employed must all be taken into consideration. Hot-water and Goadby's fluid coagulate the albumen, and destroy the fine microscopical appearances of these delicate structures,

giving rise to appearances of a changed and varying character.

I throw out these hints partly by way of aiding other inquirers, and partly as explaining perhaps some of the causes which have led to so many so-called microscopical discoveries, or to so many discrepancies.

Great importance is attached to the utero-placental decidua by Hunterians and by non-Hunterians—both believe that when the placenta is detached from the uterus, the membrane is divided into two layers: one, the 'decidua serotina,' comes away with the placenta; the other, the 'decidua parietina,' remains attached to the inner surface of the uterus; the great difference being that one party believes them to be perforate, the other imperforate membranes. In the preparation on the table, which has formed the basis and starting-point of all my inquiries, these membranes are still seen, though not so well as twelve years ago. The uterine blood-vessels and the placental vessels are also still seen, but no utero-placental vessels.

Lobstein, Desormeaux, and others, have stated that the utero-placental decidua differs from the rest of the decidua. They say "that a special irritation is set up in that part of the uterine surface which is in apposition with the ovum; this leads to a 'plastic exudation,' which progressively extends itself as the placenta becomes developed, and so the membrane is formed." There are also various speculations as to how far a thin process of the chorion and some of the elements of the mucous membrane of the uterus, or even that membrane itself, may contribute towards the formation of the utero-placental decidua. A re-examination of the whole subject by means of the microscope is what is really required to decide these doubtful points.

With regard to the "special irritation" and "plastic exudation" just referred to, something of the kind must certainly take place in cases of abdominal extra-uterine pregnancies. In these cases, the ovum, entirely detached from the uterus and its appendages, fixes itself to the peritoneum. The point of attachment, the placental site, under

the influence of some peculiar vital stimulus, becomes excessively vascular; an intervening membrane is formed, which answers the purpose of a utero-placental decidua; transudation, or what we now call "exosmosis," takes place through this membrane, and the child goes on to the full period of gestation, as perfectly developed as if it had been in the uterine cavity.

No one, I believe, has ever ventured to say that "curling arteries and veins the size of crow-quills" have been found in the intervening membrane in this situation; and I would ask, if they are unnecessary in one place, why should they be necessary in another?

Now, if I may be allowed, I should like to ask if any of the Fellows of this Society have ever seen the utero-placental curling arteries and veins the size of goose-quills, which are said by the Hunters to be as easily recognised as any of the other blood-vessels of the body? Most of us are largely engaged in the practice of midwifery, and must have had abundant opportunities of seeing them on the placental decidua if they really exist. Is not nearly all that is known in the profession about utero-placental vessels mere book-knowledge? Our teachers have told us of their existence; but even they will not undertake to say that they have seen them themselves, but rest their testimony on that of the Hunters.

Even some of the Hunterians whose names I have enumerated have confessed that these vessels are not easily found. Dr. John Reid said it was with great difficulty that he could find them; and Dr. Robert Lee, in 1832, with abundant opportunities for making the examination, could not find them at all.

Velpeau says that Dr. William Hunter's plates—like many other anatomical plates—are formed a good deal from the imagination, and that what are stated by him to be the "orifices of vessels" on the divided surface of the decidua are nothing more than minute lacerations of that membrane. As the result of what I meet with in my everyday practice, irrespective of minute examination, my experience continues to be the same as that set forth in my pamphlet seven years

ago. It runs thus :—"I have sometimes found the placental decidua quite smooth and perfect, without an opening or breach anywhere—more frequently being a soft, delicate membrane, it is found torn, with irregularities like tufts of cellular tissue on its surface. A very slight tension of its structure, by bringing the uterine surface of the placenta into a convex form, will produce rents and little openings which often look like the open mouths of blood-vessels; but their true character is easily detected by the aid of a lens." This is my experience; but I will repeat my question to the Fellows of our Society, and ask if their experience corresponds with mine.

In a Society like this it might well be asked, What are the practical bearings of this inquiry? It must be regarded, I fear, as a defect in what I will call the Harveian doctrine, and may perhaps have had to do with its non-reception by the profession, that although its supporters have satisfactorily proved the non-existence of utero-placental blood-vessels, and that no vessels of any importance are divided on the separation of the placenta from the uterus, they are altogether silent about the source of uterine hæmorrhage. It would be very reasonable to propose this question: If you do away entirely with divided blood-vessels, where does the blood come from in ordinary cases of labour and in flooding? I believe I have explained away this defect, and have given to the question a complete and satisfactory answer. I will now further observe that the only analogy I can perceive between the surface exposed by the removal of the placenta and "a stump after amputation" (Cruveilhier's notion) is, that in both there is a large raw surface. At the placental site, however, there are no divided arteries and veins, as in a "stump," nor even denuded muscular fibres, but simply an immensely developed vascular tissue covered by the decidua. As seen in recent cases—and I have had two such opportunities—one in which the patient died on the day of delivery from ruptured uterus, and another where death occurred on the third day after delivery—the surface exposed by the breaking up of the decidua looks

something like a section made of a coarse sponge, that is, with irregular openings. These openings or sinuses are the source of the blood we see at deliveries, and subsequently of the discharge it degenerates into the "lochia," containing only the serous portions of the blood. The uterine arteries and veins, as I have said before, are comparatively remote from this surface. Immediately after delivery they are ligatured, as it were, by the contractions of the uterus; and subsequently, under favorable conditions, only a very limited amount of blood is allowed to pass into the sinuses.

Now, whatever else might be said about this view of the question, besides being nearer the truth, it is certainly a more comfortable one for practitioners than that of leaving our patients to their fate, with large divided arteries and veins, as they appear in "a stump after amputation," opening into the uterine cavity. Also, if my views are correct, if the separation of the placenta from the uterus is nothing more than separating the two layers of decidua one from the other, —in other words, peeling off the "decidua serotina" from the "decidua parietina," with the rupture of no larger vessels than those I have described—practitioners need not fear, in introducing the hand into the uterus to remove the placenta, in cases of placenta prævia, uterine inertia, or morbid utero-placental adhesions, that they will thereby bring on hæmorrhage. In practice, and indeed in books and records of cases, the common experience is that the mere separation of the placenta from the uterus does not cause hæmorrhage, which would certainly happen if any considerable number of vessels were divided in the process. A good deal might also be said here about the theory adopted by several authors regarding the absorption of morbid matters by the open mouths of the uterine vessels after delivery in the production of puerperal and other fevers, and of phlegmasia dolens. But I prefer to leave much that I have to say on these points for another occasion. I will only remark here, that if there is any truth in the theory, it is rather remarkable that, after personally attending well on to 2000 cases of labour, I have only met

with one case of puerperal fever, and in that instance the causes were quite independent of any open condition of the uterine vessels. As far as the ordinary rules of obstetric practice are concerned, those usually followed, the essential part of which consists in securing a contracted state of the uterus after delivery, are as applicable to one theory as to the other.

ON EXCISION OF THE CLITORIS AS A CURE FOR HYSTERIA, &c.

By Thomas Hawkes Tanner, M.D.

The subject to which I wish to direct the attention of the Fellows of the Obstetrical Society this evening has of late attracted so large an amount of notice, that no apology is needed for asking for a calm consideration of the important question—Is the operation of clitoridectomy likely to prove a valuable addition to the means which we possess for the cure of hysteria, epilepsy, and insanity?

If I rightly understand the principles which led to the foundation of this Society, it would appear that problems such as that now proposed to be brought forward are peculiarly fitted for discussion in this room, where an interchange of opinion between men of large experience can be so readily effected. Hence, it is more with the hope of obtaining this opinion from the gentlemen present than of insisting upon the correctness of my own views that I have come forward upon this occasion. For if all that has been advanced in favour of this operation be correct, then it cannot be denied that medical men who prevent their patients from submitting to it incur a great responsibility; while if the proceeding be practised from erroneous views, and if any benefit which arises from it be only of very temporary duration, then it behoves the members of this Society to protest against its further adoption.

And here at the onset I would beg to say, that although I differ entirely with Mr. Baker Brown in the estimate

which he has formed of the value of clitoridectomy, yet I do so with considerable diffidence and much regret. For, in the first place, it will soon appear that my experience of the operation has been limited; although it has been sufficient to impress me with the opinion that it is, to say the least, unadvisable to resort to it again until indisputable evidence is obtained that the unfavorable results which have fallen under my notice have been very exceptional. Secondly, the cases for the cure of which clitoridectomy has been practised are of a most distressing character; and consequently the practitioner who departs from the ordinary routine is deserving of great credit, provided the usual remedies have failed in his hands, and he is able to suggest any treatment which offers a probability of success. And thirdly, because I believe that Mr. Brown is entirely disinterested, and is thoroughly in earnest with regard to the high opinion which he entertains of this operation. Nevertheless, I would venture to suggest that this gentleman's facts ought to be closely scrutinised by thoroughly impartial and capable observers. For, so far as the aim now proposed to be attained by excising the clitoris is concerned, Mr. Brown must be considered as the originator of the operation;* and with medical as with other difficult ques-

* The words of the text are correct as regards the proposal to cure epilepsy, catalepsy, hysteria, and insanity, by clitoridectomy. But at the commencement of the present century this operation was performed for the relief of nymphomania. Anthelme Richerand ('Nosographie Chirurgicale,' troisième édition, tome quatrième, p. 336, Paris, 1812) relates the following case:—A young woman was so addicted to masturbation that she became reduced to the last stage of marasmus. Sensible of the danger of her situation, yet not possessed of sufficient fortitude, or else irresistibly impelled by the pleasurable sensations which resulted, she could not command herself. If her hands were tied, she resorted to friction against the edge of the bed. If her legs were fastened, she managed, by moving her thighs, to provoke abundant pollutions. Her parents took her to Professor Dubois. Following the example of Levret, he proposed amputation of the clitoris, which the patient and her parents agreed to. The organ was removed with one stroke of a bistoury, and the bleeding prevented by an application of the actual cautery. The operation completely succeeded, and the patient was cured of her fatal habit. She quickly recovered her health and strength.

tions, it is not good to let any man be the chief judge in a cause in which he must obviously feel greatly interested.

I suppose it will be generally granted that, when any operation is proposed for effecting a certain object it is allowable, and, indeed, is necessary, to view it from two points—first, to look at it in its anatomical and physiological aspects; and secondly, to examine the results derived from actual experience.

If we follow this course on the present occasion we shall see that extirpation of the clitoris in the female is closely analogous to circumcision in the male, though there is an important difference to be drawn between the utility of the two operations. The great value of circumcision in a medical point of view is due essentially to its promoting cleanliness—to its preventing the retention under the foreskin of the irritating secretion from the small lenticular sebaceous follicles. By clitoridectomy, it is needless to say, no such advantage is gained. And yet, notwithstanding the manifest utility of circumcision, I have not found that those on whom it has been practised have been more free from epilepsy, hypochondriasis, and other nervous affections, than an equal number of men who have not had the prepuce removed. This is not surprising when it is remembered that, even in those cases where epilepsy has been supposed to be due to masturbation, the removal of the testicles has not effected a cure; so that this operation is commonly denounced in the present day. And, *à fortiori*, if castration be a remedy of no value in this disease, circumcision must only prove useless; while probably no one could be found so ignorant of the first principles of physiology as to recommend amputation of the penis under such circumstances.

Mr. Baker Brown has laid down the law that many of the functional disorders of women, as well as some severe organic lesions, are due to peripheral excitement of the pudic nerve. The progress of disease thus originated he divides into eight stages, viz.—hysteria, including dyspepsia and menstrual irregularities; spinal irritation, with reflex

action on the uterus and ovaries, &c., giving rise to uterine displacements, amaurosis, hemiplegia, paraplegia, &c.; epileptoid fits or hysterical epilepsy; cataleptic fits; epileptic fits; idiotcy; mania; death.* Now, if this fearful list of maladies can in some measure be swept away by removing one of the principal means by which peripheral excitement of the pudic nerve is kept up, certainly the loss of the clitoris is not too great a price to be paid for such an enormous gain. But it must be noticed, in the first place, that the advocate of clitoridectomy only asserts of this operation that it is of partial use; in other words, a permanent cure can only be hoped for, in many instances, by careful watching and moral training on the part of both the patient and her friends for some months after the excision. This admission is significant. For it is obvious that by "careful watching and moral training" nothing else can be meant than that the patient will again have recourse to injurious practices unless she is prevented; and it may therefore be asked why the "careful watching" should not succeed just as well without the operation as with it.

Then, secondly, it is important to remember that no proof whatever is given of the soundness of the theory on which the practice of excision is based. Indeed, on the contrary, the observations of Mr. Brown seem almost to prove the very reverse. For if the excitation of the pudic nerve were the cause of the symptoms, surely subcutaneous division of it ought to remove the supposed effects of the irritation. Such is not the case, however, as Mr. Brown remarks. He says, "I have long abandoned this method (subcutaneous division), as being no more certain in its effect than kindred operations on various branches of the fifth nerve for tic douloureux." This comparison is not a happy one. The division of one or more of the branches of the fifth nerve commonly fails to relieve facial neuralgia, simply because the seat of the disease is seldom in the extremity of the painful nerve, but much further back—it

* 'On the Curability of certain forms of Insanity, Epilepsy, Catalepsy, and Hysteria, in Females,' p. 7. London, 1866.

may be in the brain or spinal cord. In such cases the operation fails necessarily, just as removal by the knife of the whole side of the face would fail. But in the so-called improper excitement of the pudic nerve the primary cause of the suffering is in the clitoris; and although division of the nerve leading from this organ does no good, yet entire excision of the part is said to be curative. Mr. Brown appears, moreover, completely to ignore the influence of the ovaries in setting up sexual desire, though not a few cases are known where the absence of these glands in women has been attended with a complete want of the sexual appetite, while their removal in animals has destroyed all evidence of passion. And, indeed, it has been suggested by Dr. Blundell that in cases of severe nymphomania it might be worth consideration whether the disease could not be terminated by extirpation of the ovaries.*

But granting, though only for the sake of argument, that Mr. Brown's theory is correct, it must still be inquired if the steps taken to prevent the peripheral excitement will succeed. An anatomist would surely answer this question in the negative. What is the course of the pudic nerve? Arising from the lower part of the sacral plexus, and chiefly from the third and fourth sacral nerves, the pudic nerve (with the vessels of the same name) passes out of the pelvis through the greater sacro-sciatic foramen, below the pyriformis muscle. It then crosses the spine of the ischium, and re-enters the pelvis through the lesser sacro-sciatic foramen with the tendon of the obturator internus muscle. Between the obturator internus muscle and its fascia, and far back in the ischio-rectal fossa (*i. e.* between the end of the rectum and the tuberosity of the ischium), the nerve divides into its ultimate branches. The first branch is the inferior hæmorrhoidal, which is distributed to the external sphincter of the anus and the perinæum. The second is the dorsal nerve of the penis or clitoris, which, the deepest of all the branches, passes close to the sub-pubic ligament,

* 'The Principles and Practice of Obstetric Medicine,' p. 892. London, 1840.

through the fascia surrounding the vestibule, to supply the clitoris and its prepuce. The third, or posterior or external superficial perineal, together with the pudendal of Soemmering from the small sciatic, supply the labia majora and the pudendum. The fourth, or anterior or internal superficial perineal, goes to the labia minora. While the fifth and last branch, corresponding to the nerve of the bulb in the male, is distributed to the orifice of the vagina, vestibule, semibulbs of the vestibule (so-called by Kobelt, who considers these small masses, each formed by a plexus of veins, analogous to the corpus spongiosum in the male), and to the orifice of the urethra.

Now, if this description be correct, it necessarily follows that excision of the clitoris, however extensively performed, cannot remove or injure the trunk of the pudic nerve, but only that portion of it which corresponds to the dorsal nerve of the penis in the male, and which supplies the frænum and prepuce generally. Consequently, the utmost that can be allowed is that, although the excitation may undoubtedly be carried on by the branches of the nerve which remain uninjured, it will only be effected in a less degree.

Leaving this part of the subject, we have next to consider the actual results of the operation. Under this head a mass of indirect evidence may be brought forward. Excision of the clitoris has been practised for very many centuries by certain nations; but although the fact of the operation being performed has been handed down to us, none of the advantages which might be supposed to follow from it have been described. Strabo, in his 'Geography' (B. xvii, c. ii, § 5), written probably about the year A.D. 21, when speaking of the Egyptians, says that they "circumcise the males and excise the females, as is the custom also among the Jews who are of Egyptian origin." That this custom has continued down to our own day is proved by several authors. Mr. W. G. Browne, writing in 1779, thus alludes to it:—"The excision of females is a peculiarity with which the northern nations are less familiar; yet it would appear that this usage is more evidently founded on physical causes, and

is more clearly a matter of convenience, than the circumcision of males, as it seems not to have been ordained by the precept of any inspired legislator. A practice so widely diffused, it may be said, was hardly invented but to remedy some inconvenience commensurable in its extent. But if so, how happens it that one race of idolatrous negroes, near Fûr, has a habit of extracting two or more of the front teeth of children before puberty?—that it is customary with another race, in the same quarter, to file the teeth to a point?—that other nations cut open a second mouth?—and innumerable other irregularities which prevail among savages, and are as little to be reduced to any principle of convenience or utility? This excision is termed in Arabic *chafadh*. . . . It consists in cutting off the clitoris a little before the period of puberty, or at about the age of eight or nine years."* Thirteen or fourteen young females underwent excision in the house where Mr. Browne resided, but he was not permitted to witness the proceeding. Again, he says—"It often happens that another operation accompanies that of excision, which is not, like the latter, practised in Egypt, viz., producing an artificial impediment to the vagina, with a view to prevent coition. . . . In some the parts are more easily formed to cohere than in others. There are cases in which the barrier becomes so firm that the embrace cannot be received but by the previous application of a sharp instrument."

The celebrated Burckhardt tells us—"The daughters of the Arabs Ababde and Djaafere, who are of Arabian origin, and inhabit the western bank of the Nile from Thebes, as high as the cataracts, and generally those of all the people to the south of Kenne and Esne as far as Sennaar, undergo circumcision, or rather excision (excisio clitoridis), at the age of from three to six years. Girls thus treated are called Mukhaeyt."†

* 'Travels in Africa, Egypt, and Syria, from the year 1792 to 1798,' p. 347. London, 1799.

† 'Travels in Nubia,' by the late John Lewis Burckhardt, p. 332. London, 1819.

But of all the descriptions of this ceremony which have been given, so far as I know, that by the late Mr. W. F. Daniel, who was a very distinguished member of our own profession, is the most interesting.* According to this gentleman, the excisive process in Western Africa is not restricted to one particular part, but is more or less varied in accordance with the usages of the different districts where it is resorted to. The operation consists either of—(1) simple excision of the clitoris; (2) excision of the nymphæ; (3) excision of both nymphæ and clitoris; (4) excision of a portion of the labia pudendi, with either or all of the preceding structures. The history of the operation is involved in obscurity. Mr. Daniel surmises that it is one among the many singular customs faithfully preserved by the African races through the lapse of centuries; having probably been originally secretly inculcated as one of the gloomy rites which the female proselyte had to undergo prior to her initiation into those dread mythological creeds which, in Egypt and the adjoining countries, were shrouded in almost impenetrable mysticism. When in Old Callebar, Mr. Daniel had the opportunity of witnessing the operation, which is performed there, as elsewhere, by aged females. The girl having been placed on the knees of a woman, with the legs apart, the clitoris was seized forceps-like by two pieces of bamboo or palm sticks, and, being gently drawn forth, was severed with a sharp razor. The rather copious hæmorrhage was allowed to exhaust itself, the parts were bathed with cold water, the surface of the body dotted with some fetish preparation to avert the molestations of any malign influence, and in two or three days the invalid was allowed to resume her usual occupations. In general, the operation is performed at the desire of the woman herself (the presence of this organ being in some districts deemed a cause of reproach), or in compliance with the hereditary customs of the family to which she belongs, or in obedience to the arbitrary caprices of her superiors or of her lord and

* "On the Circumcision of Females in Western Africa," 'Medical Gazette,' vol. xl, p. 374. London, 1847.

master. That it does not prevent licentious and depraved conduct, however, seems certain, for Mr. Daniel asserts that "social life, in most of the pagan towns of Western Africa, is darkened by scenes of the grossest demoralization. . . . An illicit and promiscuous sexual intercourse is constantly carried on by nearly all classes of slave subjects, who, not fettered by any moral obligations, and solely intent on the gratification of their passions, give them an unrestrained rein long before the age of puberty." In girls of high birth who have been guilty of prostitution "another and more inhuman barbarity" is perpetrated, consisting of the introduction into the vagina of the unripe pods of the *Capsicum fructescens*, or bird pepper, beaten into a soft mass. The active inflammation which results produces severe pain, and often a permanent obliteration of the vaginal canal.

The last authority to be quoted is Mr. Archibald Hewan, who was for some years a medical missionary in Old Callebar. This gentleman tells us that as the girl in that country is approaching womanhood, when the mammæ have begun to enlarge and the catamenia to appear, the clitoris is amputated with a razor by a female expert. This process is common to all the young women, whether about to be married or not, although most of them have been betrothed since their infancy. "If not done, it is looked upon as a great disgrace, and she loses caste among her sex. So also is the want of circumcision regarded among males; and separation of husband and wife has taken place when, after marriage, the want of the corresponding operation was discovered in one or the other."* After the wound left by the excision has healed the great and final period of fattening commences that is to usher in the nuptials.

It now only remains to detail as concisely as possible the few examples of clitoridectomy which I can speak of from personal knowledge. They are as follows:—

* 'Edinburgh Medical Journal,' p. 219, September, 1864.

CASE 1.—Miss ——, æt. 30, came under my care, at the request of Dr. Armitage, 14th September, 1854. Her medical history, as noted at the time, is as follows:—Has been in bad health for many years, but has not had any special disease, save an abscess near the anus some years back. Merely feels unable to undertake any occupation. For several months has suffered especially from pain in the womb, constant backache, bearing-down pains, and leucorrhœa. Describes her sufferings as being most excruciating. Has a frequent desire to pass urine, with uneasiness about the bladder after doing so. The catamenia come on every three weeks, and continue for eight days. Is very nervous and hysterical. All the organs of the body appear perfectly healthy with the exception of the uterus, which is anteflexed. Appetite bad; is restless at night; prefers being alone; has a great aversion to out-door exercise; and has irregular action of the bowels. Six years ago was cut for fistula in ano by Mr. ——, who, she asserts, told her that she had only six days to live unless she underwent the operation.

By means of general and local treatment the uterus was permanently restored to its normal position; while the catamenia began to return regularly at proper intervals, and to continue only for three or four days at each period. Yet in spite of this improvement, and notwithstanding that the general health became better and the system stronger, Miss —— remained an invalid. Up to the commencement of 1865 she was constantly under my care or that of Dr. Armitage. During these ten years she was always suffering either from headache, neuralgia, piles, prolapsus of the rectum, or spinal pains, &c. In fact, she was, in her own opinion, a martyr to disease; spending most of her time in bed, living alone in lodgings, and never going out into the air unless positively obliged. Several bad teeth were extracted while she was under the influence of chloroform; but the cure of the facial neuralgia was only followed by some fresh source of misery.

Feeling certain that she was addicted to unhealthy prac-

tices, and being very anxious to do all that was possible to restore her health, I suggested to Dr. Armitage that the clitoris should be excised; and this gentleman agreeing with me, he administered chloroform, and the operation was performed about March, 1865.

The same disappointment has followod this as all other attempts to effect a cure. The proceeding has been a complete failure. Miss —— is still under my care; her mode of life, in spite of all remonstrance, is the same as before; and, as she will reside by herself, very little control can be exercised over her. She tries occasionally, and for a short time, to do as she is advised; but her will is weak for any good purpose, and she seems to have got into an unnatural and unhealthy mode of passing her time, from which she scarcely wishes to be emancipated.

Case 2.—Miss ——, æt. 28, was first seen by me in May, 1856. The account she gave of herself was this:—Has been educated as a governess, but has never been able to take any situation, owing to her bad health. The courses first appeared soon after she was fourteen; they are regular, continue one week, are attended always with pain and often with sickness. Ten years ago she had a violent attack of diarrhœa, which resisted treatment for a month, and reduced her strength very considerably. Soon afterwards she suffered from distressing hiccup, which was only relieved by the inhalation of ether; but up to the present time fits of this spasmodic affection, lasting a few days, recur at intervals. Her general health seems always to have been bad since the diarrhœa, though it has become worse during the last three years. For two years she has kept her bed entirely, as she says it is impossible for her to move without very severe pain in the back and womb. She has a slight hysterical cough; is often sick; has constipation; her appetite is bad, so that she will literally take nothing but bread and butter, pie-crust, and coffee; and the bowels are always constipated, while the passage of a motion gives rise to pain in all the pelvic viscera.

On examination no disease was found in any part except the uterus, this organ being retroflexed, while the labia uteri were excoriated. There was no hymen, perhaps because repeated vaginal examinations had been made by the practitioners who had been already consulted. The general opinion seemed to be that she had spinal disease.

It would only be wearisome to the Society to detail the gradual progress of this case. Suffice it that, by tact and general management, rather than by strictly medical treatment, she was persuaded gradually to leave her bed, to walk, to take proper food in proper quantities, to be drawn out of doors in a chair, and subsequently to take daily exercise. But the general result was this—that, although she gained strength, was able to take walks of two and three miles, had a healthy appetite, and enjoyed refreshing sleep at nights, she never would allow that she was in any degree better. There was always something to complain of—either the bowels acted too much or too little, or the urine was thick, or there was an occasional attack of sickness, or she suffered from backache and pelvic pains. At one time she had sciatica, then facial neuralgia, then a frequent barking cough, until I was weary of prescribing quinine, steel, cod-liver oil, change of air, and so on. At length, in the early part of 1862, she confessed that she was sure she was merely very nervous and fanciful and low-spirited; but she also stated that these symptoms could only be really conquered by the power being given to her to overcome bad habits which had long been practised, and which she felt unable to resist by her own will.

Under these circumstances, I talked the case over with my friend Dr. Armitage, and he agreed that excision of the clitoris was not only justifiable, but ought to be resorted to. In the month of May, 1862, therefore, I performed this operation, the patient being previously placed under the influence of chloroform by Dr. Armitage. The immediate result was beneficial. Ultimately, however, many of the old symptoms returned, though certainly in a mitigated degree; but, owing to this mitigation in part, though still more from the force of family circumstances, she has obtained healthy

occupation, and it is in consequence of this that she now enjoys comparative health, though she still tries every few weeks to get a prescription for some pain or other. She asserts that there is vulval irritation at times, though the intervals of comfort are somewhat long. The fact is, however, that she no longer thinks only of herself; her mind is healthily engaged while ministering to the wants of others, and she feels the happiness which flows from steady occupation.

Case 3.—Mrs. ——, æt. 30. Consulted me for the first time early in the year 1865. Has been married thirteen years. There have been nine pregnancies—four abortions and five labours at the full time. Aborted three months ago at the third month, and lost a considerable amount of blood. Catamenia regular, but very abundant; passes large clots. Has an abundant yellow discharge. Is very nervous; appetite bad; cannot sleep; complains of various muscular pains. On examination there was found considerable congestion of the cervix uteri, with excoriation of the labia. Under the influence of tonics, nourishing food, astringent vaginal injections, she somewhat improved in strength, but the mental depression increased.

Towards the end of April she complained of being tortured by lascivious dreams, and she confessed to the long-continued practice of masturbation, which she had learned at school. Bromide of potassium and belladonna failed to give any relief; and her own expression was, that she would have to be placed in a lunatic asylum unless something could be done to effect a cure of the irritation. Under these circumstances it seemed a duty to resort to excision of the clitoris, an operation which was performed on the 28th of May. She was placed under the influence of chloroform by Mr. Hulme, and Drs. Alfred Meadows and Philip Rugg were present.

The immediate good effects of this proceeding were very marked, and as long as the site of the operation remained tender the patient's mental and bodily health improved. But on the 20th of July she seemed to be relapsing into her

former state, and complaint was made of the dreams and irritation as before. Bromide of potassium was again resorted to; and under its use, together with residence at the sea-side, she improved. In October she reported herself as feeling better, but I could not persuade myself that a cure had been effected.

I have also seen two cases in which the clitoris has been excised at the London Surgical Home, not only without any benefit, but, according to the patients, with a positive aggravation of suffering. The short notes taken at the time of the consultations run thus:—

1. Miss ——, æt. 27, a governess, applied to me on 11th March, 1864. Has long been suffering from bad health. The catamenia are regular, but attended with pain; the discharge continues five days, and is accompanied with clots. Has leucorrhœa. Complains chiefly of burning pain all down the left side of the stomach. Great aching in the left leg. Bowels either much confined or much relaxed. Has been in the Harley Street Home for four months. On examination the left ovary was found very sensitive to the touch; the uterus was slightly retroflexed; the os uteri was very contracted. I did not see this lady again until January, 1865. She then told me that she had been in the London Surgical Home, and that the clitoris had been removed. Her general symptoms remain as before. She says the operation has not been of any benefit. The cicatrix is very irritable and tender to the touch.

2. Miss ——, æt. 37. Resides at home with her relatives. Consulted me on the 27th October, 1865. The catamenia are irregular; sometimes abundant, on other occasions very scanty. The general health is very bad. Complains chiefly of bearing-down pains, a sense of pelvic weight, and backache. Was in the London Surgical Home for about two months in 1864. Was operated on for a fissure of the rectum, and at the same time the clitoris was amputated. Has not derived the slightest benefit from the treatment. In

fact, she complains that she now has discomfort and irritation where previously she had neither.

Of course, the accounts given by these two patients must be received only for as much as most *ex parte* statements are worth. However careful the practitioner may be, he is always subject to uncharitable imputations; and there are not a few patients who expect to be cured in an almost marvellous manner, while they have not the slightest idea that it is their duty to aid the attempts of the physician by any efforts of their own.

In conclusion, it may be allowable to repeat that I have brought forward this important subject as a learner, and not as a teacher. My contribution has been submitted in the hope of eliciting the opinion of others. It has been published to the medical world that very many gentlemen have adopted the operation of clitoridectomy in proper cases; and amongst other names those of Sir James Simpson, Dr. Beatty of Dublin, Sir John Fife, Dr. Savage, and Dr. Routh, are mentioned as having done so. It is much to be desired that these physicians would detail the results of their experience, and especially that they will give the profession any information they possess as to the permanency of the cures which happily they may have effected.

Dr. AVELING said that, as it was proper to commence every subject with its history, he would take the liberty of opening the discussion by expressing his surprise that the history of clitoridectomy had not been more fully gone into. It was not a new operation, and he could not help thinking that a large amount of useful practical information might be gathered from the numerous authors who had written upon the subject.* It was remark-

* *Bibliography on Excision of the Clitoris.*—Hippocrates, 'De natura muliebri;' Œtius, sermo iv, cap. 103; 'Harmonia Gynæciorum,' cap. xviii; L. Mercatus, lib. ii, cap. 10; Joan Baptista Montanius, 'De Uterinis affectibus;' Martinus Akakia, 'De morb. mul.,' lib. i, cap. 12; Albucasis, 'De Incisione tentisinis;' Fel. Platerus, 'Excrescentia in Pudendo;' Guido, trac. vi, 'Tentigo;' Andrea Laurentius, lib. vii, cap. 12; Roderic a Castro, pars ii, lib. ii, cap. 18; Avicenna, lib. iii, fen. xxi, tract. iv, cap. 23; Musitanus, 'De morb. mul.,' cap. x; Lignac. vol. ii, p. 195; Zacutus, 'De

able also that no reference had been made to, and no explanation given of, the singular fact that, for 1800 years hysteria was treated by excitation of the clitoris. From the time of Galen* up to the last century, this method of treatment was constantly recommended.

Dr. WYNN WILLIAMS said, as no one appeared anxious to commence the discussion on this very interesting paper, he would do so by first relating the particulars of the case of a lady who had been under his care both before and after she had undergone the operation of clitoridectomy at the London Surgical Home in the year 1863. She had been an occasional patient of his several years previous to this date, and had been suffering from paralysis of the lower extremities, which he believed to have been caused by an injury to the lower dorsal vertebræ from a fall down some cellar steps. In the year 1863 she having come to reside in London, came again under his care with her symptoms of paralysis very much aggravated. She could extend her limbs, which she did with a jerk, but appeared to be unable to put them to the ground in the place she wished. On his visiting her one day he was informed she was going into the London Surgical Home. Being satisfied that it was not a case for surgical interference, he attempted unavailingly to dissuade her from doing so. He did not see or hear from her again for rather more than two years, when she came under his care in a most pitiable condition. She informed him that she went into the London Surgical Home, had been operated upon by Mr. Baker Brown, and had remained there some two or three months, but had derived no benefit from the operation; on the contrary, she had gradually become worse and worse. He now found her with both limbs drawn upon the abdomen, with the left under the right, so that the hand could not be passed between the thigh and the abdomen. There was also a sloughing sore in the groin, produced by pressure of the two opposing surfaces of integument. Dr. Williams was enabled, under the influence of chloroform, to forcibly extend the

Prax. med,' lib. ii, obs. 91; Hucherus, "De Steril. mul.," lib. ii, 'De affect. pudend. mul.;' M. Aurelius Sevirinus, 'De Sectionibus,' cap. 113; F. ab Aquapendente, 'De Chir. oper.;' 'De Hermaphroditis;' Uffenbach, lib. ii, cap. 34; M. Schurigius, p. 379; Sennertus, lib. iv, pars i, lect. i, cap. i; pars ii, lect. iii, cap. 5; Guillemeau, 'De l'Excrescence deshonneste du Clitoris;' Dionis, fig. xviii; Richerand, 'Nosographie Chirurgicale,' vol. iv, p. 353, cases of Levret and Dubois; Roster's 'Surgery,' p. 152; Velpeau, Médecine Opératoire,' vol. iv, p. 343; Ryan, 'Manual of Midwifery,' p. 408; R. de Graaf, 'De Argan. mul.,' cap. iii; Boivin and Dugès, 'Diseases of the Pudenda,' cap. ii; Græfe, v. ix, p. 256; Mondat, 'De la Stérilité,' &c., pp. 152—3; Heister, 4to translation, p. 197; Davis, 'Obstetric Medicine,' p. 60; 'Life and Works of Blumenbach,' Anthropological Soc., 1865, p. 126.

* 'De locis affectis,' lib. vi, cap. 5.

limbs, but it was with the greatest difficulty he could prevent them from returning to their old position. Ultimately anasarca of the integuments of the lower extremities and body took place, and sloughing, she dying of exhaustion. His patient informed him (being also confirmed by her sister) that she had not been in the habit of abusing herself, and that she was not at all aware what operation was going to be performed, or she would not have submitted to anything of the kind. This, of course, was the assertion of the patient, and would have to be taken for what it was worth. Dr. Williams stated he did not believe that clitoridectomy was a justifiable operation for the cure of hysteria, epilepsy, &c. It was true we were ordered, if a member offended us, to cut it off; and he thought that the clitoris was not the offending member, but the arms and hands; these, then, were the members that should be cut off. Of course he did not seriously recommend the amputation of the arms; but there can be no reason why they should not be put under restraint by being fastened behind the back. Indeed, it appeared that something of this kind was done after the excision of the clitoris. He had witnessed on two or three occasions, at the Surgical Home, Mr. Baker Brown excise the clitoris, and was much struck with the fact, as pointed out by Mr. Brown, that in all these cases there existed small polypi in the rectum. Dr. Williams suggested the removal of the polypi in the first instance, remarking that he believed these were the cause of the irritation, as worms were known to be when located in the rectum. But no; polypi and clitoris must be, and were, removed at the same time. In conclusion, he believed that cases of epilepsy and hysteria curable after clitoridectomy were curable without it, and cases not curable by other means were not curable by clitoridectomy.

Dr. Routh was surprised to hear his name mentioned as authorising the frequent use of clitoridectomy. Indeed, he might say that at the Samaritan Hospital it was not adopted, not because some of the staff did not think well of it in some cases, but because others held extreme opinions on the subject, and for the sake of peace it was very rarely practised. He did not know that Dr. Savage had performed the operation more than once in the hospital; and altogether, including a case of elephantiasis clitoridis operated upon by Dr. Rogers that day, it had been done only three times. He (Dr. Routh) had, however, sought to obtain information on the subject; and, through the kindness of Mr. Brown, had seen several of his cases at the Surgical Home, and watched them closely. He would now speak of two he had seen there, which made a great impression upon him. One was that of an idiot girl, who, after the operation, gradually improved so as to be able to read the Bible and converse, and who, he understood, was now in service. The other of a lady, who used to have seven

epileptic fits daily, and who, for a time after the operation, extending over a period of several weeks, had ceased to have them altogether. We could not shut our eyes to the fact that cases were occasionally brought to us where every preventive effort had been made and failed. Others in which treatment had been persisted in for years (two or three years) specially by caustics and blisters, beside internal drugs, and failed. These were the cases in which he thought this operation—which he, with Dr. Tanner, looked upon, after all, as a kind of extruded circumcision—might be tried. Suppose it failed, was it necessarily a wrong step to have taken? You might argue with equal justice against the future use of caustics and blisters. Want of success, particularly at the beginning of trials, was common both in medicine and surgery. Doubtless, clitoridectomy was sometimes unsuccessful. Sometimes patients suffering from irritation in one part supplied by the pudic nerve, if not cured in such part, and not desirous to be cured, and not morally controlled afterwards, would resume habits which would create irritation in other parts supplied by the same nerve. There were three parts especially in which this surgical irritation would be observed:—1, in the clitoris, the most frequent; 2, in the fourchette; 3, in or about the anus—a rare affection, and one, he trusted, more rare even than he thought. The proper operation would be to cut the nerve nearer its origin; but this, he feared, was a dangerous proceeding. Still it was philosophical in the case of clitoridectomy; if a patient were morally controlled also, the operation might turn out successful, not only as a salutary lesson, but by affording a break to a long-continued injurious practice, which might be prolonged, and so bring about a permanent cure. He denied, however, that depravity was at the bottom of these practices. Religious, good, and honorable women had learnt it without knowing it had any evil tendency or principle. Dr. Savage's case occurred in such a woman aged about 76. Mere defæcation induced the clitoric orgasm. Clitoridectomy cured her. This case was pathologically interesting in another point of view; because, though the orgasm was excited at a particular point to the organ affected, the removal of the latter resulted in a cure. Stating firmly his belief that Mr. Brown had practised his operations in an honest, inquiring spirit, and on a scientific basis, he thought, however, that, until statistics were produced to prove the contrary, clitoridectomy should not be practised until all other means, prosecuted over a long period, had failed; and never except after consultation with a brother practitioner, wherever practicable. It was a chance of recovery a patient should have the option to try, all the circumstances being freely explained to her. This was not only the fair and honest, straightforward course to pursue; it was also the philosophical course.

Dr. Tyler Smith said that, as the subject had been thrown into the arena of public discussion, he felt bound to relate his ex-

perience and express his opinion in the matter. In the first place, he must express his surprise that Dr. Tanner and Dr. Routh had spoken of clitoridectomy as analogous to circumcision in the male. The fact was that the prepuce or foreskin was a very unimportant structure as compared with the clitoris. As regards sensation, the clitoris was the analogue of the male penis, and was the organ of sexual sensibility in the female. It had happened to him to have at one time, in St. Mary's Hospital, two patients in whom the clitoris had been removed at the London Surgical Home. One was a married woman, and the other a very respectable single person. Both of them declared they had not practised self-abuse. They were not in any way benefited by the operation. They further stated that the operation was performed without their being at all aware of its real nature. On one occasion he was consulted by an unmarried lady of rank, upon whom clitoridectomy had been performed, and who declared she had only consented to the operation because she was assured that, unless she did so, she would become insane. This patient confessed to the existence of great sexual irritation; but she stated that the operation had not been of any service in this or any other respect. In another instance, he had been asked to see a young unmarried lady, and give an opinion upon her case and its treatment. He found a number of small fissures round the anus, producing much irritation, which extended forwards to the vulva. He could detect no other sign of disease, and advised that the sphincter should be forcibly dilated so as to separate the cracks. He was then asked if he did not think some further operation was imperatively required; and, on replying in the negative, was told that a surgeon who had seen her had advised the removal of the clitoris; she also feared mental disease, though then there was no sign of it, and the patient strongly maintained that she had not excited herself beyond scratching to relieve the itching. He (Dr. Smith) objected to the removal of the clitoris in this case; but, as he saw no more of the patient, he could not tell the result. Such were some of the cases he had met with, and which had led him to the conclusion that the removal of the clitoris in cases of hysteria and self-abuse could not be justified. We might as well think of removing the penis in cases of masturbation in the male.

Dr. Greenhalgh considered that the value of clitoridectomy must be determined by its practical results, and he would therefore briefly narrate some cases which had come under his notice. The first was that of a single lady, about forty-two years of age, who had been addicted to this habit for upwards of seven years, operated upon by Mr. Isaac B. Brown on June 5th, 1865. In a note, dated January 6th, 1866, this lady states—"The irritation has returned with its wonted force up the front and back passages. I feel grieved, having gone through so much, that there are no better results." He had also heard of another case where a lady

upwards of seventy years of age had had this operation performed, and she was no better after it than she had been before. In a third case, which had come under his care in St. Bartholomew's Hospital, the patient stated that she had been admitted into the Surgical Home for a slight periodic discharge of blood from the vagina, with pains in the lower abdomen and about the hips; for this her clitoris and nymphæ were cut out, without her knowledge, by Mr. Isaac B. Brown; the operation was followed, in three months, by an abscess in the bowel, which burst and discharged matter for three weeks; since that time she had been worse in every respect, suffering from difficulty in micturition, with intolerable irritation, for the relief of which she was obliged, she said, to rub the parts. This poor girl had assured him (Dr. G.) and others that she had never had any irritation of the vulva, or rubbed the parts prior to the operation. A polypus was removed from her rectum while in the hospital; and she was discharged relieved. He referred to another case admitted into St. Bartholomew's Hospital, of aggravated hysteria, who had been considerably worse since the operation, with the nature of which she was wholly unacquainted. She expressed great alarm when informed that the parts had been mutilated. Dr. Greenhalgh regretted that he had not taken notes of other cases, about which he had been informed by trustworthy practitioners, operated upon by the same surgeon, and alike unsuccessful in their results. He did not know of one case which had been permanently cured by clitoridectomy. He believed that the operation was based upon a false theory; and although self-abuse was, perhaps, temporarily checked by loss of blood, soreness of the parts, and moral control, yet ultimately the irritation and the habit recurred with increased intensity; and, in one case at least, it had actually produced the irritation which led to the habit it was said to cure. He consequently regarded clitoridectomy as a very unjustifiable operation for the purposes for which it had been recommended by Mr. Isaac B. Brown. He did not believe that masturbation produced either imbecility, epilepsy, or insanity, and he thought the habit in question was entirely referable to mental peculiarity.

Mr. Baker Brown said that after what had been urged against his operation of clitoridectomy, all he asked for was a quiet and calm consideration of what he had to say in defence. The subject was either important, or it was not important. He (Mr. Brown) considered it of the greatest importance, and he begged to thank Dr. Tanner for the kindly tone in which he had written his paper, and the scientific manner in which he had treated the whole question. The subject was, however, one of experience, and perhaps the best way to answer objections was by reviewing in detail all the cases that had been mentioned by the various speakers. In Dr. Tanner's first case we were not informed how

long treatment had been pursued prior to the operation, and what means had been employed; nor were we told—in fact, we must infer the contrary—whether the operation was followed up by moral and physical training. In his account of the second case there occurred the expression that the patient suffered from "painful defæcation." This is most important, as very frequently there is the coexistence of a fissure of the rectum, which, if unrelieved, will frustrate the operation. But he (Mr. Brown) considered this case at least in some degree satisfactory; and he did not doubt, if Dr. Tanner had had more experience of the after-treatment on which he laid the greatest stress, that a complete cure would have resulted. At any rate, from the patient having been formerly bedridden, and unable to follow her calling of a governess, we learn that after the operation she was able to take a situation the duties of which she was still fulfilling. Then cases were mentioned by Dr. Tanner which had previously been under his (Mr. Brown's) care. The statements of patients so made he declined to recognise; for it was impossible to form any just estimate of the history given us by patients of their treatment under other practitioners. Accordingly, he made it a rule always to ignore such statements, and declined to hear even the names of gentlemen by whom patients had been previously treated.

With regard to Dr. Wynn Williams's remarks, possibly a wrong diagnosis had been made; but then he was not infallible, and a mistake may in this instance have occurred. But he would presently state a case which he thought would show just cause why he should believe that paralysis might arise from self-abuse, and could be cured by clitoridectomy. Dr. Williams wanted to know why he did not tie the patients down, and use all those other milder remedies before he excised the clitoris. His answer to that was—in all the cases which came under his care those measures had been already tried, and patients only came to him when other practitioners had failed after years of treatment to cure them. Further, with reference to Dr. Williams's remarks about polypi and fissures of the rectum, he had to tell him that he had frequently cured patients, by treating these affections alone, of a number of hysterical symptoms; but it was a curious fact, explain it how you will, that fissures of the rectum were most frequently associated with masturbation, and it was the failure in curing these symptoms by simple treatment of the bowel, &c., which led him to direct his attention to the clitoris.

In regard to Dr. Routh's remarks, he begged to thank him most heartily for the tone in which he had spoken. It was not that he feared opposition; he was thankful for it, for "Magna est veritas et prevalebit;" and at that moment he could recall a discussion which took place in that room when a former occupant of the presidential chair stigmatised as unworthy of consideration

his operation for fibrous tumours, an operation which was now universally recognised. He (Mr. Brown) did not mean to say that he had not made mistakes and wrong diagnoses; but who had not—who, especially, in striking out a new path in any branch of medical science? He did not seek out this subject; he was most unwilling to take it up; but it was forced upon him by the conviction that he was bound to do all in his power to relieve a vast number of sufferers who had been long considered to be hopelessly incurable; and now, having put his hand to the plough, he was not likely to turn back, and he had confidence that honest work, viewed by the light of impartial observers, would ultimately be recognised by the world at large.

In reference to what had fallen from Dr. Tyler Smith, that clitoridectomy would unsex a patient, he did not believe that such a statement could have been made by him, because Dr. Tyler Smith was a great physiologist, and had written a scientific book on midwifery, and he could not therefore hold such an opinion as this. The first patient mentioned by Dr. Tyler Smith was operated upon by him (Mr. B.) for fissure of the rectum; her symptoms were unrelieved, and it was at her own earnest desire that he afterwards excised the clitoris. The result was, that the lady was perfectly well. Only a few days since he met her; and she told him that she was not only quite well, but had got occupation, and was most thankful for all that had been done to her. With reference to Dr. Tyler Smith's cases in St. Mary's, it was impossible to deal with them, because he did not know their names; but he had no doubt that by reference to the case-book of the "Home," these as well as the others could be satisfactorily disposed of.

With reference to the cases mentioned by Dr. Greenhalgh, he begged to say that though it was true that in the first case alluded to by him there was a relapse, the reason thereof was that she was not long enough under after-treatment and watching; but she subsequently came under his (Mr. B.'s) care again, and a few days ago he received a letter from her, of which the following is an extract:—"For the last two months my nights are decidedly better, but I dare not be too sanguine, having been so often disappointed by a return of the disease; but I am truly thankful for present relief, and trust it will continue, and that the last operation may prove effectual." Dr. Greenhalgh had mentioned the case of an old lady, aged seventy-two, who, he said truly, had been operated upon lately, and he affirmed that she was now no better. Now the following are the facts of this case:—This old lady had been seen by no less than twenty-three medical men during the last two years, amongst others by Dr. Greenhalgh. Having been seen by him (Mr. B.), she was recommended to have clitoridectomy performed. She and her friends took a week to consider it, and finally consented. She had since been under his (Mr. B.'s) care,

in company with Drs. Hawkesley and Harding both well known as men of high professional standing and probity. That lady to-day told him that she had not had the slightest return of the irritation since the operation. Before concluding, he wished to relate a few cases which had been under his care, and which had been seen by numbers of medical practitioners, some of whom were then present. The first had only lately gone out of the "Home," having been retained there for observation; she was brought into the Home in the arms of the porter, her legs hanging helplessly, and her own history, given by herself was—"I don't recollect when I walked." She acknowledged to habits of masturbation. The clitoris was excised; not one drop of medicine was given; and in three weeks she walked unaided across the ward, and left the Home perfectly restored to health.

The second case was that of a patient who came from Salisbury by the recommendation of Mr. Coates, of that city. She was fifteen, had suffered from continual incontinence of urine, the urine constantly dribbling away; she confessed to having masturbated from her earliest recollection. The clitoris was excised, proper restraint used, and the patient left the Home at the end of six weeks, able to hold her urine for three or four hours at a time.

Another case, which Dr. Meadows knows of, was that of a single lady, aged fifty, suffering from frequent attacks of uterine hæmorrhage. Nothing was done but extirpation of the clitoris; and this patient continued to reside in the Home as assistant matron, when Mrs. Day was head nurse and matron to the institution. After Mrs. Day left, this patient continued to reside with her in her private *maison-de-santé*, assisting her in the management thereof. This case had been done more than five years; and many cases are recorded which have stood the test of five, six, seven, and even eight years, from the time of operation. Other cases he could mention in private practice. These operations were sometimes done at the earnest entreaty of the patient, only on the promise of the strictest secrecy; and for many years he (Mr. B.) had endured the ignominy of being held up to reprobation, because he was stated to have performed this operation on a lady without the consent of her husband, and without her knowledge; the fact being that the lady begged him to observe secrecy from her husband, and had afterwards, in polite phraseology, "sold" him, telling her husband that the operation had been done unknown to herself. He was glad to hear of cases of failure, because they taught him how to avoid error for the future; but he would engage to bring forward more than one success for every failure that could be mentioned. And if he could give only twenty successes, it would at least illustrate that the principle was not entirely at fault.

Dr. Rogers, having had every facility given him by Mr. Baker Brown to see the patients who had been operated upon,

and having conversed with several many months after the operation, felt bound to say that, in some cases at least, great good had resulted. It was admitted that it had entirely failed in others, but this was no reason for imputing improper motives, or for denouncing the operation altogether. He thought the Society was bound to inquire into the facts in a calm, dispassionate manner. Clitoridectomy had been very rarely performed in the Samaritan Hospital, as there existed a difference of opinion amongst the staff with regard to the result to be derived from it. He had that day removed a diseased and elephantine growth of the clitoris, the necessity for which, however, had been fully agreed to by all the staff of the hospital.

The PRESIDENT observed that the discussion had, perhaps unavoidably, turned too exclusively upon the validity of particular cases operated upon. He himself could have wished for time to express himself more fully upon the main question of the relations between masturbation and epilepsy and insanity. He had had some experience in these diseases, and he could confidently say that in the majority of cases the vicious practice was resorted to after the disease had existed some time, when the mind had become degraded by disease, and when, being in confinement, the sexual passion could not be otherwise gratified.

Dr. TANNER, in reply, said that one of his chief reasons for bringing forward this subject was to ascertain from gentlemen who had had experience of the operation if the cures were permanent. This fact could not be ascertained by simply describing the state of the patients when they were discharged from the hospital. There could be no doubt that so long as the wound remained unhealed, and even for some few weeks afterwards, no improper practices could be resorted to, as the parts were left very tender. His own opinion was that further evidence as to the conditions of the patients some months after operation would be very valuable. It had been argued that, in those cases where irritation was voluntarily produced, other local remedies than excision of the clitoris ought to be tried. But on this point Dr. Tanner had no hesitation in expressing his opinion that the use of caustics, blistering fluids, and the actual cautery to the clitoris, were cruel and perfectly useless proceedings. There seemed to be no lack of reliable evidence that where such treatment had been adopted for many months, no benefit whatever had resulted. As regards tying the patient's hands at night, fastening the legs, and so on, such proceedings had failed over and over again. The weak point in Mr. Brown's cases was, that, for some months after the operation, many of the patients had to be carefully watched; and the question could not be shirked whether such watching would not succeed just as well without the excision as with it. In conclusion, Dr. Tanner urged that the subject was eminently deserving of the attention of all engaged in the treatment of women's

diseases. He had no doubt that many distressing cases of bad health were really due to long perseverance in the practice of the bad habits which had been mentioned to the Society. If clitoridectomy could effect a permanent cure it would be a great boon; for, notwithstanding what had been said by one or two speakers, he adhered to the opinion expressed in his paper, that this operation was analogous to that of circumcision in the male.

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